845
L. C.

LIBRARY OF CONGRESS
JUN 5 1899
41005

The

# PAPER TRADE JOURNAL

"The Consumption of Paper is the Measure of a People's Culture."

VOLUME XXIX.—NO. 1. NEW YORK, JUNE 3, 1899. PER ANNUM, $4.00. SINGLE COPY, 10c.

BULKLEY, DUNTON & CO., Nos. 75 and 77 Duane St., New York.
"Excelsior" Felts Piece Felting and Jacketing.
EXTRA HEAVY CANVAS DRYERS.
Satisfaction Guaranteed. Send for Price List.
For Economy, Durability and Good Results they are Unequaled. Long Established and Well Known. A Trial is Solicited from Manufacturers not already Using them.

JOHN H. LYON & CO., Importers and Dealers in all Grades of....
And Dealers and Packers of all Grades of
Woolens for Shoddy and Flock Purposes.
Paper Stock,
Office and Warehouse: 174 DUANE STREET, NEW YORK.

F. BREDT & CO., Sole Agents for JOSEPH PORRITT & SONS'
No. 194 FULTON STREET, NEW YORK CITY, U. S. A.
TRADE MARK. English Feltings.
... Also Importers and Dealers in ...
MARINE BLUE (Aniline) for News Paper Mills.
JACKETING, ROLL CLOTH, DOUBLE EXTRA CANVAS, ULTRAMARINE BLUE.

THE MANHATTAN RUBBER MFG. CO., 18 Vesey Street, New York.
Manufacturers of High-Grade Mechanical Rubber Goods.
*We make a Special Feature of Belting and Rubber Covered Rolls for Paper Mills.*
FACTORIES: PASSAIC, N. J.

COCHRANE CHEMICAL CO. ....MANUFACTURERS OF.... ALUM
55 Kilby St., BOSTON, MASS.
Highest tests, free from iron, and all other grades used by paper makers.
Also Manufacturers of ACETIC ACID, SULPHURIC ACID and other chemicals.

Wm. Pickhardt & Kuttroff
NEW YORK BOSTON CHICAGO PROVIDENCE PHILADELPHIA
AURAMINE (PAT'D)

METAL SKYLIGHT AND VENTILATOR MANUFACTURERS. *Established 1873.*
Absolutely no leakage from any source. Send for illustrated catalogue.
E. VAN NOORDEN COMPANY, 383-387 Harrison Avenue, Boston, Mass.

J. L. & D. S. RIKER Importers and Manufacturers' Agents.
46 Cedar St., New York,
ALL TESTS SODA ASH AND ALKALI
Sole Agents for the United States and Canada of **The United Alkali Co., Ltd.**, of Great Britain, for the sale of their various brands of
BLEACHING POWDER

H. C. HULBERT & CO.
No. 53 Beekman Street, New York,
IMPORTERS OF AND DEALERS IN....
Paper Makers' Supplies.
*Sole Agents for over Twenty-five Years for the sale of*
"Stubbins Vale Mills" Felts and Jacketing, Pearl Hardening and "Berger" Ultramarine.....
Agents for "REFINED ALUM," for Sizing and Bleaching.
CANVAS DRYER FELTS, Heaviest and Best, in All Widths.

TRAIN SMITH COMPANY,
Importers of and Dealers in all Descriptions of... Paper Makers' Supplies
24 FEDERAL STREET, BOSTON.
BRANCH OFFICES: 140 Nassau Street, NEW YORK. 14, 16, 18 and 20 St Mary Axe, E. C., LONDON. 21 Irwell Chambers, Fazakerley Street, LIVERPOOL.

LEWY BROS. COMPANY 31 and 33 North Moore Street, NEW YORK.
FOREIGN RAGS, DOMESTIC NEW RAGS.
HOUSES IN EUROPE—LEWY GEBRUDER, RUMMELSBURG, BERLIN, KOENIGSBERG, PRUSSIA.

CALYPSOL GREASE
MANUFACTURED BY DIAMOND COMPOUND COMPANY
Trade Mark Registered.
*Especially Adapted for Paper Making Machinery.*
Newark, N. J. Chicago, Ill.

R. H. OVERTON & SON,
IMPORTERS, PACKERS AND DEALERS IN.... PAPER MAKERS' SUPPLIES.....
Times Building, Room 104, NEW YORK.

A. WERTHEIM & CO., HAMBURG, GERMANY,
EXPORTERS OF ALL GRADES OF
Sulphite and Soda Pulps
SIGMUND GOLDMAN, Agent for the United States and Canada, BENNETT BUILDING, 90 NASSAU ST., NEW YORK

A. KLIPSTEIN & CO.,
122 PEARL STREET, NEW YORK.
Boston, Philadelphia, Chicago, Cincinnati, Providence and Hamilton, Ont.
AURAMINE.

Good Color and Good Finish are obtained by using .....PEARL ALUM
HARRISON BROS. & CO., Incorporated
PHILADELPHIA CHICAGO NEW YORK

CASTLE & GOTTHEIL,
Importers of and Dealers in
TIMES BUILDING, 41 PARK ROW, NEW YORK.....
SULPHITE AND SODA PULPS.
Old Linen and Cotton Rags, New Cuttings, Jute Stock, Sizing, etc...

LIBRARY OF CONGRESS U.S.of A.

TS1080
.P2




# The Oakland Paper Company,

**MANCHESTER, CONN.,**

MANUFACTURERS OF....

## FINE WRITING PAPERS.

We carry in stock in **Colored Laid Writings:**
In Folios, 18, 20 and 24 lbs. In Royals, 24 lbs. In Double Caps, 28 and 32 lbs.
Blue, Pink, Amber, Lilac, Canary, Melon, Dark Green, Cherry, Orange, Fawn, Gold, Dark Blue, Golden Rod.....

In **Tinted Wove Check Papers:**
24 lb. Folio; 28 lb. Royal; 32 lb. Double Cap; 19 x 26, 32 lb.; 19 x 28, 36 lb.
Opaline, Violet, Shell Rose, Azure, Primrose and Blue.

In **Tinted and White Bond Papers:**
Opaline, Pink, Primrose, Buff, Golden Rod, Azure and Blue, in 16 lb. Folio.
White in 13, 16, 20 and 24 lb. Folio, 20 and 24 lb. Royal and 20 and 24 lb. Double Cap.

We also carry a full line of **Linen Writings** in Oak Leaf, Oakland and Acorn, in Cream and Light Blue, and in Plain Linen, Dublon Linen and Quaker Linen, in Cream.

LARGEST MANUFACTURERS OF

# COVER PAPERS

IN THE WORLD!

☞ Send for New Sample Book and note additions to line.

**CROCKER MANUFACTURING CO., HOLYOKE, MASS.**

West Virginia Pulp & Paper Company.

Manufacturers of

.... *Bleached and Unbleached*

# Spruce Sulphite Pulp.

EXTRA BOOK AND LITHOGRAPH MACHINE FINISHED AND SUPER-CALENDERED....

***Express and Manila Papers.***

DAILY CAPACITY, 140 TONS.

OFFICE
**Mutual Reserve Building,** 309 Broadway, **New York.**

Mills at Piedmont, W. Va., Luke, Md., Davis, W. Va.
Cable Address: "PULPMONT, NEW YORK."
A. I. and A. B. C. Codes used.

HARTFORD STEAM BOILER INSPECTION AND INSURANCE CO. HARTFORD, CONN.

ORGANIZED 1866.

**THOROUGH INSPECTIONS AND Insurance against Loss or Damage to Property and Loss of Life and Injury to Persons caused by**

## STEAM BOILER EXPLOSIONS.

J. M. ALLEN, President.
WM. B. FRANKLIN, Vice-President.
F. B. ALLEN, Second Vice-President.
J. B. PIERCE, Secretary and Treasurer.
L. B. BRAINERD, Ass't Treasurer.
L. F. MIDDLEBROOK, Ass't Sec'y.

# PLEASANT MILLS PAPER CO.,

MANUFACTURERS OF

# ROPE MANILLAS.

OFFICE: 608 CHESTNUT ST., PHILADELPHIA.
MILLS: PLEASANT MILLS, N. J.

# STONE & FORSYTH,

SELLING AGENTS FOR SUNSET MILLS,

# TISSUE AND TOILET PAPER

**BOSTON, MASS.** Tissue Paper of all grades a specialty.

# MERRIMAC PAPER CO., LAWRENCE, MASS.

MANUFACTURERS

## ENAMELED BOOK PAPERS.

COATED LABEL AND LITHOGRAPH.
ENGINE SIZED FLATS.
SUPERCALENDERED AND MACHINE FINISH BOOK.

SAMPLES AND QUOTATIONS ON APPLICATION.

# NONOTUCK PAPER COMPANY,

**HOLYOKE, MASS.**

TWO MILLS—TWENTY-FIVE TONS DAILY.

FLAT AND RULED WRITINGS, ENVELOPE PAPERS, ENAMELED BOOK, COATED LABEL, SUPERCALENDERED AND MACHINE FINISHED BOOK.

# WHITMORE MANUFACTURING CO., HOLYOKE, MASS.

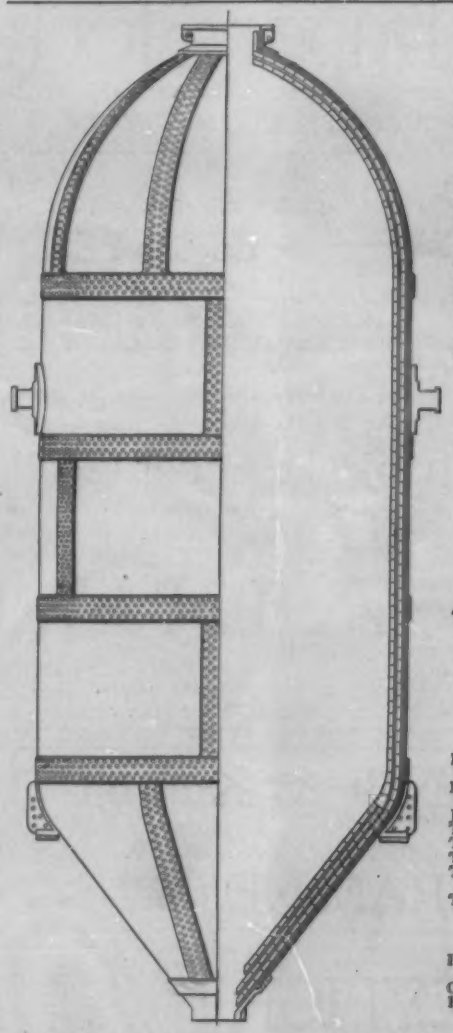
—MANUFACTURERS OF—

COATED LITHOGRAPH AND CHROMO PLATE

## PAPERS AND CARD BOARD.

WHITE, TINTS AND COLORS.

*PASTED WEDDING BRISTOL A SPECIALTY.*



THE NON-ANTEM SULPHITE DIGESTER CO.

MANUFACTURERS OF

## E. Meurer's Patent Sulphite Digester,

85 Times Building, NEW YORK.

***A Digester Absolutely Reliable.***

**RECOMMENDED**

**by the following Mills:**

Hudson River Pulp and Paper Co., Palmer, N. Y.
New York and Pennsylvania Co., Johnsonburg, Penn.
J. & J. Rogers Co., Ausable Forks, N. Y.
The Duncan Co., Mechanicsville, N. Y.
The Nekoosa Paper Co., Nekoosa, Wis.
The Kimberly & Clark Co., Neenah, Wis.
The Newton Falls Paper Co., Newton Falls, N. Y.
The Laurentide Pulp Co., Ltd., Grande Mère, Canada.

**Those in Course of Construction:**

Piercefield Paper Co. (International Paper Co.), Piercefield, N. Y.
Carthage Sulphite Pulp Co., Carthage, N. Y.
Hollingsworth & Whitney Co., Waterville, Me.

# CROSBY STEAM GAGE AND VALVE CO.

*CROSBY POP SAFETY VALVES AND WATER RELIEF VALVES, STEAM ENGINE INDICATORS.*
*CROSBY IMPROVED STEAM GAGES, SAFE WATER GAGES and PATENT GAGE TESTERS. SIGHT FEED LUBRICATORS.*
*CROSBY PRESSURE RECORDERS AND REVOLUTION COUNTERS. BOSWORTH FEED WATER REGULATORS. CHIME WHISTLES.*
*BRANDEN VALVES, Rubber, with Wire Coil Insertion. THE MOST DURABLE Pump Valve Made.*

*Globe and Angle Valves, with removable seats and discs.*

We guarantee not to leak at highest pressures.

**WE REPAIR STEAM APPLIANCES.**

**Manufacturers and Dealers in ENGINE, BOILER and MILL SUPPLIES.**

**OFFICE AND WORKS: BOSTON, MASS.**

**Stores: Boston, New York, Chicago, and London, England.**

The

# PAPER TRADE JOURNAL

"The Consumption of Paper is the Measure of a People's Culture."

VOLUME XXIX.—NO. 1. NEW YORK, JUNE 3, 1899. PER ANNUM, $4.00. SINGLE COPY, 10c.

## ANOTHER BAG COMPANY,

### AND POSSIBLY A COMPETITOR TO THE UNION.

**Talk of a New Consolidation of the Outside Interests—A Bear Raid on Union Paper Bag Company's Securities Suspected—A Decline of Twenty Points in Common Stock—Preferred to Have a Dividend.**

The men at the head of the Union Bag and Paper Company were startled this week by the cry of "Breakers ahead!" and President Luke Fisher hurried on from Chicago to take charge of affairs in this vicinity. The first thing he discovered was what he considered an attempt to depreciate the company's stocks on the part of certain holders, who, it is said, started a bear raid in order that they might buy in at a low figure and get more of this industrial.

For the first time since the formation of the company, about three months ago, the Union Bag and Paper Company's stock this week was bought and sold heavily, with the consequence that it was hard hit by the bears. From being a sort of fixture at 45 or thereabout, the common dropped to 24, which was the bottom price reached on Thursday, while the preferred varied a few points below 70.

Brokers who are presumed to be thoroughly posted as regards the stock gathered it in rapidly, for it is expected to return to its former condition very soon and is looked upon as a good investment. "It can hardly be otherwise," said one of them yesterday, "since the company only a short time ago invested $1,000,000 of its surplus in government bonds, and set aside another $1,000,000 for working capital, proving that the concern is in good financial condition."

Another issue which confronted the president of the company was the formation of a bag company which may be a competitor to the Union. It was therefore a lively week for Mr. Fisher, and when he left the Fifth Avenue Hotel yesterday his usual imperturbed expression wore a somewhat troubled look.

For some time there has been a movement on foot to consolidate the paper bag interests not identified with the Union Company, and the incorporation of the Continental Bag Company at Augusta, Me., last week, with a capitalization of $3,000,000, is taken to mean that this end has finally been accomplished, as such a large capitalization can hardly be explained on any other basis. What attitude this company will take toward the Union is causing some speculation among the latter's officers, some of whom were interviewed on the subject by THE PAPER TRADE JOURNAL representative.

Of the concerns outside the combination one of the best known is the Elsas Paper Bag Company, which has a factory in Atlanta, Ga., and is a very active concern. It is reported to have given an option to the new company. Others mentioned are the Universal Paper Bag Company, of New Hope, Pa.; the Columbia Paper Bag Company, of New York; the Hercules Paper Bag Company, of Reading, Pa.; the Columbia Paper Bag Company, of Baltimore, and the McGinnis Paper Bag Company, of Bridgeport, Pa.

"These establishments all make flat and square bags, and some make others," said an officer of the Union Company, "though we make 90 per cent. even of the old-fashioned flats. Our company, to the best of my knowledge, is not interested in any way with this venture. The only point which we are looking after is that one of the companies in it does not attempt to place a patent in the market which is an infringement on one of ours. This company offered to sell its patent to the Union when it was formed, but we declined. The moment they try to put it on the market we shall be after them strong, as the machine is an infringement."

Officers of the Union Company laughed at the idea of competition. "With twenty years' experience in paper bag making," said one, "I cannot conceive how a machine could be made to-day that would make a bag like ours and not infringe on some of the patents, particularly the self-opening. As for taking away our trade in the square and flat bags, we would not care much. There is no money in their manufacture. For some years the big manufacturers have simply made them as fillers. They practically gave them away to get an order for up-to-date goods. If it comes down to competition, however, we could easily hold our own. George West has a lot of old machines at his mill which could turn out flat bags cheaper, probably, than any other plant. Most of the others in the Union also have these machines, which they can operate at the lowest rate. The disposition of the company, however, is to get rid of this old-fashioned work and make the best grades."

It was emphatically denied that this Continental Company had been formed after an agreement with Luke Fisher, and that the intention was to hand over the properties to the Union Company when the company is formed. "We could never agree on prices," said one gentleman, "for we do not consider any of the outside plants of much value, and would therefore be willing to offer but very little."

Although the present Union Bag and Paper Company is only three months old, its prosperity appears to be established. The earnings thus far are said to be 50 per cent. more than when the companies were working individually, and the expenses are no greater. On Monday next a dividend of 2 per cent. will be declared on the preferred stock. It is stated that a considerably larger one could be made, both on preferred and common, but the disposition of the company is to wait until there is a large surplus before doing so.

## WHITING MILL IS OUT.

**Promoters of the American Fine Paper Company Allow Their Option to Expire—Success of Combination Predicted, Nevertheless.**

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, MASS., June 2, 1899.

The option which the promoters of the American Writing Paper Company have held on the mills of the Whiting Paper Company expired yesterday, and at present the Whiting Paper Company cannot be considered as included in the combination. Mr. Whiting refuses to discuss the situation, further than to say that the promoters of the proposed organization decided not to accept the Whiting Paper Company's terms. He was positive that his company would remain outside of any combination. At least it would not become identified with the combination at present proposed.

The refusal of the promoters to accept the terms of the Whiting Company is regretted in Holyoke. A prominent manufacturer said this afternoon that the consolidation would be effected regardless of the decision to decline the Whiting Company's terms. He said that the president of the new concern would probably not be a Holyoke man, but some competent man would be selected. Dean & Shibley, the promoters, said to your correspondent: "We are not ready at present to make any statement regarding the fine writing combination for publication."

O. C. F.

### Incendiarism at McEwan's Mills.

McEwan Brothers Company has as yet had no results from its offer of $1,000 as a reward for information that will lead to the arrest of the person or persons who set fire to the coating plant of the company's paper mills at Whippany, N. J., on May 26. The total loss will reach about $45,000, and the insurance is not half that amount.

The McEwans are certain that it was the work of an incendiary. The fire was discovered at midnight in a pile of old paper in the rear of a two-story frame building, which is 200 feet long and used as a machine shop and storage house for stock. This blaze was extinguished, but two hours later a second blaze was seen in the central part of the building known as the coating plant.

## TO BE ARBITRATED.

### THE RIVER POLLUTION CONTROVERSY AT CUMBERLAND, MD.

**Trial of the Case Against the West Virginia Pulp and Paper Company Postponed Until November, But the Company's Suggestions as to Arbitration Are Not Accepted by the Authorities.**

The Peace Conference at the Hague does not interest the citizens of Cumberland, Md., half as much as the disarmament proposition which the West Virginia Pulp and Paper Company has just made anent the "pollution" dispute which was to have been tried again this week in the County Court at Hagerstown. By general agreement the trial has been postponed until the November term, and in the meanwhile Western Maryland will test the value of arbitration, and attempt to decide whether a paper mill is ruinous to a city's health.

In order to settle this question the company recently offered to shut down its mills and allow the State chemist or anyone else whom the city should select to analyze the water and determine if possible just what proportion of the pollution the paper mill caused. This was in a dull season, when there was opportunity to shut down, but the proposal was refused. Later it was accepted, but the mills were then running, with orders ahead. The company could not afford to close them.

As the time approached for a new trial, to be followed indefinitely by others, the company's counsel, Mr. De Warren H. Reynolds, drew up the following and presented it to the city council:

"In settlement of the unfortunate controversy between the West Virginia Pulp and Paper Company and your honorable body, about the condition of your water supply and the alleged pollution of the same by the West Virginia Pulp and Paper Company, a controversy which has now fruitlessly extended itself in the courts for several years, we are instructed by our client, the West Virginia Pulp and Paper Company, to make you the following proposition, which it believes will be a final and amicable settlement of the whole matter. It is proposed that an agreement be at once entered into between your honorable body and the company to submit the whole controvery to arbitration in the usual manner as follows:

"First. That the controversy be submitted to a board of arbitrators to consist of two respectable and competent chemists and water experts, one to be selected by each party within one week from this date. If these two cannot agree upon any matters submitted to them, they to select a third competent chemist and water expert to unite with them in their conclusions, and a decision of a majority of said arbitrators to be binding.

"Second. That the following questions shall be submitted to said arbitrators, namely: What are the causes of the injury to the water supply of Cumberland, and whether the effluent from the mills of the company at Luke, Md., materially contributes to the injury.

"Third. The arbitrators shall inspect the Potomac River and its tributaries, the waterworks and water supply and the dam at Cumberland, the mills of the company and their effluent at Luke, the mines and their effluent, and all other factories and places and other sources of possible pollution, and shall analyze the waters and make all such tests as they shall determine to be necessary to give an intelligent judgment on said questions, and do all other things which they may desire to do to arrive at a determination of the matters in controversy submitted to them, and shall report their findings and conclusions as early as possible, not later, however, than November 1, 1899.

"Fourth. Should it be determined by a majority of the arbitrators in their report that the works of the company do not materially injure the water supply of Cumberland, then all pending prosecutions and suits against the company shall be abandoned as hereinafter provided.

"If, on the contrary, it is found by the report of the ma-

jority of the arbitrators that the works of the company do materially injure the water supply, then in the agreement it shall be provided that the company shall within ninety days from the filing of the report completely remedy the causes of the injury to the water if the company can find any possible means of doing so. If the company cannot or does not remedy the trouble within ninety days, then it shall at once cease the operation of such portion of its works as the board of arbitration shall so find to be causing the injury, and shall not again renew the same at these mills or any others to be built there.

"Fifth. Each party shall pay the arbitrators selected by it, and both parties shall jointly pay the third arbitrator or referee, if one should be called in by the arbitrators.

"Sixth. In case of any future trials or litigation between the State or the city and the company, in relation to the controversy, either party shall have the right to use as evidence the testimony of the experts and their findings, their analyses and all other matters of knowledge obtained by them in this examination.

"Seventh. This agreement to be entered into at once between the parties, upon condition, however, that in case it is entered into you will procure the assent of the State's Attorney of Allegany County thereto, and that he will agree that all pending prosecutions against the company shall be in abeyance until the report of the arbitrators is made, and that in case both parties shall in good faith carry out the agreement, all State cases now pending to be placed on the stet docket."

The Cumberland contingent which is opposing the company at all points raised several objections to this form of agreement, and made a counter proposal. They want three experts, impartially appointed, who, among other things, shall have the works shut down twenty days, while they observe the waters of the Potomac, and whichever way they decide the paper company is to bear all expenses. It is not likely that this counter proposition will be considered. There will be an arbitration of some sort, however, during the summer, and it is expected that the dispute will be settled without going to court again.

## RIVER POLLUTION ABROAD.

### A Controversy in Aberdeen, Scotland, Involving the Stoneywood Paper Mills and the Mugiemoss Paper-Making Plant.

The Stoneywood Paper Mills, belonging to Alex. Pirie & Sons, and the Mugiemoss Paper Mills, belonging to C. Davidson & Sons, near Aberdeen, Scotland, on the River Don, are charged by the local authorities with the pollution of this stream. The Aberdeen District Committee is not disposed to have the people pay for a special sewer to carry off the effluent which is now said to be polluting the Don. The mill owners have suggested a system of "irrigation" to carry off the water into sewers, but this would require pumping, say the committee, and the volume is so great that they do not believe such a plan practicable. They desire to hold the mill owners responsible for remedying the alleged menace to health.

The city, after the manner of the Cumberland citizens in the West Virginia Pulp and Paper Company's dispute, seem to have taken sides on the question, the majority siding with the companies. The latter recommend that the committee proceed against the mill owners under section 116 of the Public Health Act, and have the matter settled.

The paper men hold that they have the right to connect their mills with the city's sewers, but they are willing to take steps to render the refuse inoffensive before it is discharged into the river or sewers.

The Wanborough Paper Company at Cheddar on the river Little Yeo is also having trouble of this nature.

### Electric Power in American Shops.

Nothing within the past year or two has directed more attention the world over to the capacity for rapid and good work in American engineering establishments than the recent award of the contract for a bridge over the Atbara River, a tributary to the Nile, in the Soudan, to an American firm of bridge builders. The bridge was needed most urgently for railroad use in connection with Sir Herbert Kitchener's famous military operations; indeed, time was of the first importance, and in this respect the American builders distanced all other bidders, guaranteeing to deliver the whole bridge of seven spans in seven weeks, while the earliest delivery that could be obtained from any of the British firms was for two of the spans in six months.

Why American builders should, in this instance, have led the world and have crowded British firms out of a territory which they might well have considered peculiarly their own is an interesting question. Improvements in methods, the introduction of time and labor saving devices, with the incidental reduction of costs, furnish a ready answer, and it is particularly interesting to note that, as not the least of these improvements, electrical conveniences have been cited. Electrically driven shop tools, heavy ones as well as light ones, have eliminated many difficulties of operation, and electric cranes have greatly simplified the handling of heavy pieces. The principle of portability in the tools, moreover, has been applied to the widest possible extent, and, in itself, has contributed almost as much as any one other thing to that rapidity and excellence of output for which American shops have become noted.—Cassier's.

## JOHNSONBURG'S NEW MILL.

### New York and Pennsylvania Company's New Paper-Making Plant Started Up—A Modern Two-Machine Book Mill.

On Thursday of this week Mill No. 5 of the New York and Pennsylvania Company, at Johnsonburg, Pa., was started up. It is one of the most complete paper-making buildings in existence. Ground for it was broken about one year ago, and the constructing engineer, Richard Stutz, has done his work so thoroughly that Mill No. 5 stands as a model of perfection.

Noticeable among the up-to-date features is the automatic stoking apparatus supplied by the American Stoking Company and the Jeffry Manufacturing Company. There are fourteen 250-horse-power steam boilers, and the stoking is done without manual labor. The coal is taken from the railroad cars and fed under the boilers, and the ashes are removed on conveyors and delivered again to the cars, all by the same power. This makes a considerable saving of labor, and is much more satisfactory in every way.

The mill's capacity is estimated at from 35 to 40 tons of "M. F." book and "super" per day. The product will also include writing and lithograph paper and some envelope paper. There are two Pusey & Jones 137-inch machines, with six large stacks of super calenders, and fourteen 2,000-pound Holland engines furnished by the E. D. Jones & Sons Company. The calenders were furnished by the Holyoke Machine Company. The compound condensing Corliss engines, of 2,400 horse-power, were put in by the Robert Wetherill Company, of Chester, and the ten cutters by the Moore & White Company, of Philadelphia, and the Rice, Barton & Fales Machine and Iron Company, of Worcester, Mass.

The beating engine room of this mill is probably the largest in the country, being 600 feet in length. It also contains refining engines, stuff chests and screens. To make the building fireproof the floors were constructed entirely of asphalt, and for hygienic purposes the Sturtevant Company's hot-air system for heating has been installed. The building is lighted throughout by electricity generated by machinery supplied by the General Electric Company.

Superintendent Edward Marshall, who is in charge of the New York and Pennsylvania Company's paper mills at Johnsonburg, will have Mill No. 5 in his care also, and the general management devolves upon A. G. Paine, Jr., who already knows the paper-making industry thoroughly. The new mill will begin to turn out paper on Monday, and will consume a considerable percentage of the soda and sulphite pulp made by the company's mills. Mr. Paine says he has orders enough ahead to keep running several months.

### New Method of Sizing.

A paper on which one can write with most of the metals is the subject of a recent patent. This process consists in producing during the fabrication of the paper, in the presence of the fibre itself, an impalpable precipitate of carbonate of chalk. The formation of carbonate of chalk in the presence of the fibre has the advantage of assuring perfect repartition and the complete adherence of the carbonate on the fibre.

Any of the methods of preparing carbonate of chalk by precipitation may be employed; for example, the double decomposition of chloride of calcium and carbonate of soda in the vat. This procedure, however, is inconvenient, in that it produces chloride of sodium, which makes the paper slightly hygrometric.

A preferable method consists in employing, in the solution of the pulp, chalk water, in lieu of ordinary water, and in passing into the vat at the head of the machine a gaseous current containing, for instance, carbonic acid, the combustion gas from the boilers, after summary separation of solid impurities by washing, or the gases from the ovens employed in the fabrication of the chalk employed, as practiced in the manufacture of sugar or of carbonate of soda by the Solvay process.—Bulletin-Journal des Fabricants de Papier.

A number of young women employed in the rag room of the Windsor Paper Company's mill, at Windsor, Conn., went on a strike on Monday because the company proposed to pay them by the piece instead of by the week, as heretofore. The company was not put to serious inconvenience.

## NO MORE SPACE AVAILABLE.

### So Director Capehart Informs the Committee on Paris Exposition of the American Paper and Pulp Association.

The plan for exhibiting the paper-making industry of this country at the Paris Exposition next year will probably be abandoned. Nobody regrets this more than the paper manufacturers themselves, many of whom expect to spend their vacations next year in the French metropolis and have been looking forward with some pride to America's part in the exposition. Colonel Paine, for example, intends renting a house in Paris for the summer.

When the committee of the American Paper and Pulp Association met recently it decided that 10,000 square feet would be the proper space for this part of the American exhibit, and so informed Mr. A. S. Capehart, director of Liberal Arts and Chemical Industries. He took the matter under consideration, and communicated with Commissioner-General Peck. The outcome was the following letter, here printed in full:

CHICAGO, Ill., May 17, 1899

C. W. Rantoul, Jr., Secretary American Paper and Pulp Association, 101 Times Building, New York:

Dear Sir—Replying again to your esteemed favor of the 18th inst., in which, as secretary of the American Paper and Pulp Association, you notify me that "if the commissioner-general is prepared to allot us a space of 10,000 square feet on the ground floor, this committee will immediately take into favorable consideration the question of an exhibit," the committee in this sense being the committee of your association on the Paris Exposition, permit me to inform you that it would be impossible for Commissioner-General Peck to allot to your industry the amount of space wanted by your association, because he does not possess the space; and the commissioner-general therefore instructs me to so inform you, and to state that nothing in connection with his official prerogatives would afford him more pleasure than complying with your demands if it were within his power to do so.

The Paris Exposition authorities require that all products be installed and exhibited in the classified space: The space for your products is located in a gallery; the space is 177 feet long by 19 feet and 8 inches wide, making 3,486 square feet gross exhibit space; the space has a main circulating aisle on either side. From the whole amount must be taken that which is necessary for circulating aisles, and exhibits must be installed about 12 inches back of the front constructive line.

In view of the correspondence of record in this office, and the several interviews which have taken place between different members of your association, your committee and myself, the liberty is taken at this time of informing you that 855 square feet, or 26 per cent. of the whole amount of space to be devoted to Chemical Industries, has been set apart for Class 88, Group XIV., page 75, Book of General Information forwarded you under another cover—manufacture of paper, raw materials, equipment, processes and products—and that the same will be held for acceptance by you until the close of business hours on Saturday, June 10, 1899. During this time this department will be pleased to receive an application from your association for all or a part of this space in which to install and maintain an exhibit of your products. If your association accepts this space it will be permitted to decorate the same in any manner that will be agreeable to this department and acceptable on the part of the French Exposition authorities; the latter reserve the right to approve the artistic and architectural features of all constructions in or about exhibit spaces.

In addition to the above, and in case your association becomes an official exhibitor, the proposition on my part to afford you facilities for the exploitation of your industry in the Special Annex Building is renewed. You will remember that it is proposed to install in this building general printing-house machinery and the products of allied interests, and to afford to the allied interests space for office purposes, where the representatives of such interests will be permitted to interest and entertain their customers and others.

Personally I regret my inability, as well as that of the commissioner-general, to meet the demands of your association; but the same is a physical impossibility as, within the exposition grounds proper the space you demand does not exist. The additional space which has been granted the United States is located practically 7 miles from the exposition grounds proper—for transportation, marine, life-saving, bicycles, automobiles, railways, steam cars and iron and wood working machinery—and would, in the opinion of the writer, even were it possible for Commissioner-General Peck to secure space at this point sufficient to meet your demands, have practically no value to your association, because of its location and the character of the interests to be installed and gathered there; while in this department, which includes that of Liberal Arts, Chemical Industries, and the Special Annex Building referred to, will be included the exhibits and exhibitors of practically all the interests in any way related to your industry.

Please be kind enough to give this matter the earliest possible attention and prompt reply, and greatly oblige.

Respectfully yours,

(Signed) A. S. CAPEHART,
Director of Liberal Arts and Chemical Industries.

This is regarded as final by the committee, which will now advise the abandoning of the plan to exhibit as an association. Of course, something may transpire in the next week to alter this decision, but it is not likely, so that if there is any paper exhibit at Paris next year from the United States it will be placed by individual companies.

It is reported from St. John, N. B., that one of the companies which is building a pulp mill near that place contemplates building a paper mill as well.

# MORE MILLS ON FOX RIVER.

**Two New Plants to Be Erected in the Vicinity of Appleton, Wis.—Local Opinion Concerning the Fine Writing Combination—John Strange's Plans for the Future.**

[FROM OUR REGULAR CORRESPONDENT.]

APPLETON, Wis., May 31, 1899.

Manufacturers report trade about the same as it was a week ago. The diminution in the volume of orders that was spoken of at that time is of very little account as compared with the total of business, and some manufacturers say that they have noticed no letting up at all, so that, taking one thing with another, paper-making activity in this valley is very brisk.

The opinion is expressed in some quarters that the writing paper combination is meeting with a good many delays, and if it is not completed pretty soon it may not be completed at all. The course of the stock market during the past few weeks has been indicative of a tendency on the part of the public to take a more conservative view of industrial securities, and it is plain that industrials still to be floated must be of very high order to be successfully introduced. This general tendency may or may not have a bearing upon the proposed writing combination.

Your correspondent hears this week of two new paper mills that are to be erected this season in this locality. There is scarcely a possibility of a doubt that both these plants will be constructed. It is impossible to say more at present, as the preliminaries are not yet settled. It is understood that one of the proposed companies will be incorporated within two or three days, and the other probably shortly after. Each mill is to be a two-machine mill, and one will have ground wood and sulphite departments also. This presages a good deal of building activity the coming season.

John Strange, formerly of the Strange Paper Company, at Menasha, but who for a couple of years past has been residing in Oshkosh, has been in town recently. Mr. Strange said there was a probability that he would be back in the paper-manufacturing business again before long. Steps were being taken, he said, to form a company to put up a mill for making book papers particularly, and possibly print as well. From another source it is learned that the mill, if constructed, will be located somewhere in the Indiana gas belt, where ex-Congressman S. A. Cook, of the S. A. Cook Manufacturing Company, of Menasha, has extensive holdings. With fuel of this character, the mill will be operated entirely by steam power.

### Eau Claire's Water Power Controversy.

W. L. Davis, of the Winnebago Paper Mills, of Neenah, who is also largely interested in the Dells Paper Company, at Eau Claire, returned last night from a business trip to Eau Claire, and was interviewed to-day respecting the new sulphite mill which is proposed to be constructed there by the Dells people. Mr. Davis said that the company had quite a fight on its hands at Eau Claire, and it was very possible that the sulphite mill might be built at Chippewa Falls, a city a dozen miles farther up the Chippewa River. "A peculiar condition of things obtains at Eau Claire," said Mr. Davis. "The city built the dam, it is said at an expense of about $250,000, and then turned over the water power rights thus created to the Dells Improvement Company, on condition that the company maintain the dam and become responsible for all damages that might be caused through overflowage, etc. We rent our power of the Improvement Company. We have a piece of land adjoining our present mill, upon which we have a seventy-seven-year lease, but the city has some sort of a claim upon it. The claim does not amount to much, but we thought it would be a good time to settle the matter, so we asked for a quit-claim from the city in order to clear the title. From this a fight has arisen in the council which has come to such a pass that there is talk of the city trying to annul the Improvement Company's franchise.

"As a result Chippewa Falls has offered us ground free, and free fuel, and a remission of taxes for a term of years if we will build the sulphite mill there. The fuel would come from the waste of one of the largest saw-mills in the country, which is located at Chippewa Falls. All their saw-dust and waste wood is now turned into the stream, and does no good to anyone. There would be more than we could use during the summer, and we could accumulate a supply to last through the winter. We don't much care how the matter turns out. We have ordered the digesters of the Pusey & Jones Company, and by the time they are ready we shall know where to put them. There will be two digesters, each of 10 tons daily capacity. None of the other machinery has been ordered, as the digesters take the longest to build; but we shall be ready very soon to place contracts for all the machinery we shall need."

L. C. Locklin, who has recently resigned his position of superintendent of the Kaukauna Fibre Company in order to accept another position, was presented last week by the employees of the Fibre Company with a handsome Masonic watch charm.

C. B. Pride, of this city, is completing the plans for a new paper and pulp mill in Sweden, and expects to have them ready for forwarding in the course of a few days.

### Neenah Paper Company's Departure.

"It may be interesting to the readers of THE PAPER TRADE JOURNAL," said John A. Kimberly, Jr., of the Neenah Paper Company, to your correspondent to-day, "to know that during a short time we have been engaged in the manufacture of a new line of papers. They are high-grade, machine-finish, laid and woven, antique, medium and high-finish specialties of all kinds. This is a line of papers that has never been made heretofore in this valley, and we are having a marvelous demand for them. We are not exactly snowed under with orders, but it comes pretty near it. We have been doing a good deal of improvement work about the mill of late in preparation for these papers. We are about through now, though we have just put in a new Wheat duster and another of the Dodge Manufacturing Company's rope drives. We are thinking of adding one or two more rope drives."

Anxiety is felt around the mills about the difficulty of procuring some kinds of stock, such as soda pulp and soft shavings. Some of the manufacturers are reported to be a little pinched for these essentials, and they do not know exactly what to think respecting the scarcity of them. They are afraid there may be some significance about it that does not appear on the surface.

A number of the manufacturers are taking a day off occasionally to devote to fishing. The excellence of the fishing in Lake Winnebago this spring is something remarkable. Traveling salesmen who strike the towns along the river and lake are making a practice of getting up early in the morning and having a little sport before breakfast.

Peter Vandenwildenberg, employed at the mill of the Little Chute Pulp Company, had a foot crushed very badly last week by the end of a heavy shaft falling upon it.

Lambert Johnson suffered a somewhat similar accident at the Combined Locks Paper Company's mill, his ankle being crushed by the fall of a calender roll. The accident is a very serious one, and he will be unable to work for a number of months.

FOX RIVER.

### American Paper in South Africa.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 1, 1899.

It is only necessary to take a superficial glance at the manifest of the cargo of any vessel leaving this country for Cape Town to appreciate the large volume of business done by the United States with South Africa. The growth of our export trade with that country furnishes one of the most remarkable features of our commerce.

During the last fiscal year we did a very large business with South Africa in paper, stationery and kindred lines, and from present indications the current year should see a substantial increase in this trade, for it is said that at no time have South African buyers been so ready to examine the claims of American productions, and especially novelties, as at present.

As in the case of South America, our strongest competitors for the trade of South Africa are Great Britain and Germany. It is argued that the British manufacturer has an intimate knowledge of the South African trade, and caters to it by extending to it the same credits that are allowed at home, and here lies apparently the chief barrier to the rapid extension of American trade. The elaborate rating system of our mercantile agencies does not extend to South Africa, and the American manufacturer, in the habit of depending upon such a report, is undecided as to how far to trust South African merchants. Hence the demand for cash, which to some extent lessens the opportunity for building up a trade, especially when these same merchants can secure credit for a reasonable time from the manufacturers of either Great Britain or Germany.

Notwithstanding the drawback in the matter of credit, paper and stationery made in this country have become very popular in South Africa and are being more and more sought after. In view of this fact, it is suggested that the movement of American exports to South Africa might be assisted by a scheme similar to that at Caracas, where the National Association of Manufacturers has established a warehouse for the display of American goods.

A. F. T.

One of the speakers at the recent annual meeting of the British Paper Makers' Association called attention to the fact that in Germany, and also in Austria, there is a school of paper making, and he urged the establishment in London or Manchester of a school to teach the art properly. "If they put their shoulders to the wheel," he said, "and brought up their sons as practical paper makers, to understand the chemical as well as the practical side, they would hold their position in the markets of the world." He would like to see a scheme to enable paper makers of the future to have a scientific education, as well as a practical knowledge of the trade.

# PAPER IS MOVING WELL.

**The Trade in Philadelphia Is Well Supplied with Orders, but Demands for Future Delivery Are Not Extensive—Reorganization of the Garrett Paper Company.**

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, May 31, 1899.

While there has been an expected and a customary falling off in the volume of business during the last two weeks, the paper trade finds itself still well supplied with orders. The mills are reported to be busy, although advance orders are not so extensive as a fortnight ago. Stock is moving well, and printers are busy generally, but there has been noted a remarkable falling off in catalogue work. For some unknown reason merchants are delaying their annual trade catalogues, and printers suffer therefrom.

A reorganization of the Garrett Paper Company, 102 and 104 North Third street, has been effected. Harvey Garrett has retired from the company, and his brother, Elmer Garrett, who was the leading spirit in the establishment, has associated with himself William Gregory, who was formerly foreman for Davis & Son, printers. Both Mr. Garrett and Mr. Gregory are known as wide-awake business men. The former will give his attention to paper and allied interests, while the latter will confine himself to printing, it being the firm's intention to do a general paper and printing business combined.

Memorial Day received a scant recognition from the trade. The firm of A. G. Elliot & Co. was the only large one in the paper trade which closed its store all day. Other firms closed at noon.

Matthias Becker, an employee of C. S. Garrett & Son, received fatal injuries while working in the Buck Run mill last week. Becker was a machine tender, and while engaged about a dryer was caught and so severely injured that he died soon after being removed. His death was entirely accidental.

G. W. Reed has joined the staff of the Garrett-Buchanan Company. The company has determined to open new lines of business, and Mr. Reed will concentrate his efforts on working up a book-paper trade.

Clarence Beebe, of New York, made the rounds of the trade during the week.

S. M. Kennedy is receiving the felicitations of the trade anent the celebration of the twenty-fifth anniversary of his wedding. Mr. Kennedy entertained a large number of friends from the trade at his home last week.

The representative of McEwan Brothers, who brought news to-day of the burning down of the mill at Whippany, N. J., was so besieged by questioners, to whom he could give no details, that he had to withdraw from Paper Row.

John S. Williams, of Williams & Marcus, who lately became a benedict, gave the second and last "at home" to his friends last evening.

A. S. Rudolph, of the Ashland Paper Mills, and Irwin N. Megargee, both residents of Lower Merion township, appeared as champions of the people last week in protest against the closing of a road which a large manufacturing concern desires to have stricken from the county plan. The issue is unsettled.

Isaac Guggenheimer, of Guggenheimer, Weil & Co., was one of a large party of Baltimore merchants and manufacturers which visited the site of the National Export Exhibition to-day. Mr. Guggenheimer expressed his satisfaction at the arrangements made for the exhibition in September next. It is likely that his firm, manufacturing stationers, will participate.

Edward Megargee is about again, after a three weeks' attack of typhoid fever. Mr. Megargee learned of the presence of the disease at its early stage, immediately stopped work and entered an hospital. He believes that he saved himself a long illness by prompt action.

E. R. G.

### The Belting Consolidation.

The movement which was started some time ago to bring about a consolidation of the leather belting interests of the country is said by the promoters to be meeting with a fair degree of success. Some opposing elements to the general scheme have had to be contended with, which has retarded progress in bringing the matter to completion. It is known that two of the large manufacturers of belting have not been inclined to consider any kind of propositions. These companies manufacture a large proportion of the belting used. The promoters say that an announcement with regard to the matter will probably be made within ten days.

Industrial "promoters" in Austria are trying to combine all the paper manufacturers in that country into one huge joint stock company or "trust." It is said that about two-thirds of the paper manufacturers favor the plan.

# FINE WRITINGS IN DEMAND.

**Pad and Tablet Makers of Western Massachusetts Are Buying Paper Freely—Paper Men Will Try to Arouse Interest in River Transportation.**

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., June 1, 1899.

The sudden coming of summer has created some uneasiness in the paper trade, but without reason. Business has, however, kept up very well this week. The orders for fine writings have come in well this week, and there has also been a good demand for book papers. The orders from the papeterie men continue, and there is every indication that these men are not waiting for the combination in that branch of the business to be perfected before stocking up. From a number of the manufacturers I learn that some very good orders have been received from this source this week, and that other jobbers are contemplating purchasing, but for some reason have delayed.

The papeterie men are known to be quite busy just at present, and the pad and tablet men are also rushed with orders. This fact has had a great deal to do with the condition of business in many of the mills. The mills in Western Massachusetts, outside of this city, report good business, and they also state that they have orders on hand for some time to come. The time for the summer dullness is at hand, but some manufacturers are confident that business is to be fairly good this summer. However, they are preparing for a reduction in orders, and in some of the mills necessary repairs will be made next month, provided the combination has not by that time assumed control of the plants. The Water Power Company has not as yet decided upon the time that the water will be out of the canals during July, but ample notice will be given the mills in order that the necessary repairs may be made.

**River Transportation.**

A movement is on foot, backed by some of the paper trade interests of this city and Springfield, to take President McKinley from this city to Springfield in a steam launch while he is in this section, with a view of getting him personally interested in the opening of the Connecticut for navigation. Whether this plan will be carried through is doubtful. However, the manufacturers have not given up hope that something in this direction can be done at the next session of Congress, and an appropriation for the preliminary work will be asked for. The paper manufacturers have been interested in this matter for several years, and have worked energetically in that direction during the past two. It is thought that if the President can be interested, his influence at Washington will practically assure an appropriation sufficient to make the necessary surveys, at least, if not to insure the opening of the river.

Just what work will be done this fall and winter by the manufacturers in this direction has not been decided, but something to further the interests of the project will be determined upon later in the year. The Washington end is being cared for by Congressmen Gillet, of Springfield, and Lawrence, of North Adams.

A statement has been made that the railroads would be against the opening of the river, because the cutting of freight rates, which would be a natural sequel of the opening of the river, would cut into their earnings. Another statement has been made, but likely without authority, that one railroad company would put on a line of boats as soon as the river was opened, and endeavor to control both the river and rail freight, if possible. As a matter of fact there will be competition for the river freight.

**Possible Change of Owners.**

State Senator George N. Tyner, formerly treasurer of the Holyoke Envelope Company, is considering purchasing an interest in the Excelsior Paper Company, of this city. The property is owned by Hodge, Hoffman & Smith, and is doing a very successful business.

Ex-Mayor George H. Smith said that there had been some talk between Mr. Tyner and the owners of the mill some time ago, but that he had heard nothing of it recently. He did not know the exact standing of the matter at present. Senator Tyner is in Boston at present attending the sessions of the Massachusetts Legislature.

It is stated, however, that since his retirement from the Holyoke Envelope Company last year, when that plant was turned over to the United States Envelope Company, he has been restless without an active business. Should Mr. Tyner take an interest in the plant it is said that some additions may be made to the mill and arrangements made for turning out a fine grade of writing paper.

The company, by reason of the grade of paper manufactured, is not at present in a position to enter the combination, and for this reason the combine has not secured an option on the plant. The mill was erected in 1873, and improvements have been made in the property from time to time. Its original owners were the Newtons, but the mill has changed hands a number of times. It has a capacity of 8,000 pounds daily of book and card papers.

Dennis Menton, employed by the Crocker Manufacturing Company, and living at 24 Lyman street, was caught in the agitators at the mill Tuesday morning and was badly injured. He received a compound fracture of the left leg and other severe injuries. He was removed to an hospital, where his wounds were treated. Although his injuries are severe, he will recover.

Contractor McMullen, of the firm of McMullen & Co., contractors for the erection of the new dam across the Connecticut, has invited the Connecticut Engineers' and Surveyors' Association to inspect the work at some date in July to be arranged later.

A number of the local mills are said to have been involved in the failure of Charles T. Askew, at New York, Saturday last.

**Paper Men and the Public Library.**

William Whiting, of the Whiting Paper Company, and James H. Newton, of the Norman and Wauregan companies, have been selected by the building committee of the Holyoke Public Library to report upon the style of library building best suited to the needs of the city.

President Gross, of the Holyoke Water Power Company, is contemplating a trip to Europe in the near future.

William J. Reardon, of the Albion Paper Company, has been confined to his home by illness for the past week. He is recovering.

As stated in THE PAPER TRADE JOURNAL some time since, the Holyoke Water Power Company will not consider the proposition for lighting the city and discontinuing the present suit sent to it by the board of aldermen, and an official statement to that effect has been sent to the city by the company. This throws the matter back to its former standing, and the hearings before the special commission will likely be resumed in the fall. FERRY.

## Improvement at Rockville's New Plant.

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass. June 1, 1899.

The American Enameled Paper Company is perfecting arrangements to start its new plant at Rockville, Conn., and J. B. Mumford expects to move his family from this city to Rockville in the near future. The contracts for the machinery to be used in the plant will be let as soon as possible, and arrangements for this are being made. The company has not decided as to the number of employees with which it will begin operations, but as soon as the mill is opened the manufacture of the paper will be pushed rapidly, in order to meet the orders already on hand. The company has a paying business already assured for the first few months at least. O. C. F.

## FIRES.

A disastrous fire occurred in the yards of the American Straw Board Works in Dayton, Ohio, on May 28. A number of stacks of straw used in the manufacture of the board were evidently fired by boys or tramps, and in a short time caused a great blaze. The fire department arrived in time to save several of the stacks, but a large area was cleared. Buildings were saved by hard work on the part of the firemen. The loss will be heavy.

Fire in a stock house on Bridge street, Holyoke, Mass., caused a damage of about $10,000 on May 29. The structure was owned by P. Garvan, of Hartford, Conn., and was filled with paper stock, belonging for the most part to Mr. Garvan. The damage to his stock is estimated at $8,000. The George R. Dickinson Paper Company had stock stored in a part of the building also, but this was not injured.

Fire broke out in the Michael Paper Mill, Monroe, Mich., last Wednesday evening, setting fire to 50 tons of straw nearby. Considerable damage was done. Only the prompt service of the city fire department prevented the conflagration from spreading over the neighborhood.

The Chronicle-News Publishing Company, Trinidad, Col., has been damaged by fire.

Harper & Day, stationers and booksellers, Trinidad, Col., have been burned out.

S. Williams, wall paper dealer, New York, has been damaged by fire; insurance, $3,000.

## FAILURES.

A receiver has been appointed for the Press Publishing Company, Zanesville, Ohio.

The plant of the Millican Printing Company, Fort Worth, Tex., has been sold by the assignee.

George Johnson & Co., Constantinople, Turkey, would like to have all American paper manufacturers send them samples of their paper, including paper bags and envelopes. In a letter to THE PAPER TRADE JOURNAL they say that they "feel sure there is an immense business to be done in the Levant in American papers of all descriptions." Their address is British Post Office, Constantinople.

# CHICAGO'S PAPER MILL.

**A New Company to Build a Plant to Make Writing and Fancy Book Papers—The Equipment Ordered.**

It is expected that John M. Shartle, former superintendent of the Tytus-Gardner Manufacturing Company at Middletown, Ohio, and the capitalists backing him will incorporate a company next week under New Jersey laws to manufacture paper in Chicago. The capitalization is said to be $1,000,000, and the company proposes to put up a first-class plant on the south side of Michigan slip, on North Water street. Mr. Shartle has secured a twenty-five year lease on this location from the Chicago Dock and Canal Company, and promises to begin immediately the erection of a structure 200 by 300 feet.

Mr. Shartle has ordered ten beaters from the Dayton Globe Iron Works and one 120-inch machine from the Black & Clawson Company. The equipment of the mill will include two of the latter. The intention is to make principally writing and fancy book papers, turning out about fifty tons per day, and to use the rags and waste paper of Chicago as part of the material. For the remainder they figure on either shipping in the pulp prepared near the Wisconsin forests by boat, or rafting logs from the North to Chicago just as some of the Wisconsin manufacturers do to their mills. How far this latter source of supplies will be made use of depends on the profitableness of the venture.

As far as the use of stray paper and rags gathered in Chicago is concerned, a great saving can be effected by the manufacturers, it is said, over the present method of utilizing them. The scrap paper when sent even to the mills nearest Chicago at present requires an outlay of $2 a ton for freight, and the freight on the product back to Chicago is the same amount. A mill in the city would thus save a good $4 a ton over its outside competitors.

## OBITUARY.

John H. Tangeman, pioneer paper manufacturer in the Miami Valley, died Sunday morning last at his home in Wyoming. He was an enterprising resident of the town and was prominent in all public-spirited matters. In 1849 he joined the great crowds that flocked to the California gold fields and remained in the West for two years, when he returned to the Miami Valley, and with C. W. Friends as a partner erected a paper mill on the site of the present one in Lockland. He had been active in the paper trade continuously for forty-eight years, living in comparative retirement recently. Mr. Tangeman was born in Halbstadt, near Bremen, Germany, in 1821, and began work in the flour mills at Lockland when a lad. His funeral was held from the family home on Tuesday afternoon and was largely attended.

Charles Henry Lamport died at his home, 42 West Ninety-third street, New York, on May 25, after a week's illness. At the time of his death he was superintendent of the New York salesroom of the Boorum & Pease Company, blank book manufacturers. Previous to that he had been with the National Blank Book Company, having been treasurer of the J. G. Shaw Company when it was succeeded by the National. Mr. Lamport was born in Canandaigua, N. Y., and began life as a clerk with Sheldon & Co., book publishers. He was a partner in the firm of J. Q. Preble & Co. prior to its failure.

## NEW CORPORATIONS.

The Christian Nation Publishing Company, New York city, has been incorporated. Capital, $25,000. Directors—John W. and Harriet S. Pritchard and William T. Park, of New York city.

The Magazine Publishing Company, Boston, has been incorporated to conduct a publishing and printing business. Capital, $20,000. Incorporators: F. Maass, L. Elkins, Marx Schwabe.

The Bismarck Publishing Company, Berlin and New York, has been incorporated to publish and sell books, periodicals, etc. Capital, $130,000. Incorporators: H. E. Cain, J. Lord, J. L. Wolcott, all of Dover, Del.

L'Araldo Italiano Publishing Company, New York city, has been incorporated to conduct a printing and publishing business. Capital, $20,000. Incorporators: C. Sconfietti, A. C. Astarita, N. Celia, G. Guillino, New York city; N. Grilli, Brooklyn.

The Hassett Publishing Company, which proposes to do business principally in Massachusetts, has been incorporated in New Jersey. Incorporators: E. G. Carter, Edward Beeker, Edwin A. S. Lewis, Russell Lord Tarbox, and Acton Cirill Bassett.

The American and the World Company, Dover, Del., has been incorporated to conduct a real estate, printing and publishing business. Capital, $125,000. Incorporators: L. B. Heller, New York; E. R. Heller, Newark, N. J.; James L. Wolcott, Dover, Del.

# MR. PRALL NOT LIABLE.

**End of a Suit Which Grew Out of the Globe Paper and Fibre Company's Failure—Canadian Pulp Wood Comes to Dexter.**

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., May 31, 1899.

What was supposed to be an important case by all the paper makers throughout this section was opened in Justice Wright's court, in this city, on Monday afternoon of last week. It was the case of Charles Ehrlicher, of this city, v. Frank Webb and John H. Prall, of New York city, and it grew out of the affairs of the Globe Paper and Fibre Company. It was alleged that the defendants agreed to loan money sufficient to carry on the business for a consideration of 400 shares of the capital stock of the company, to be contributed by the company, and 100 shares each contributed by the plaintiff and James D. Spencer.

After the case had been on trial for three days, during which time many witnesses had testified, a motion was made by the defendants' counsel on Wednesday for a nonsuit, which was not granted, but on opening the court Thursday morning Justice Wright changed his opinion and granted the motion. Mr. Prall is much gratified over the result.

For the first $15,000 advanced he took as security a second mortgage on the mill and had to bid the property in at a foreclosure sale. The stock that he received as a bonus turned out to be a boomerang, for it was decided that the stockholders of the company must pay the debts of the corporation, and his stock was assessed about $11,000.

At the Stella Pyrites Mills, which are located near Hermann, N. Y., workmen are constructing a building 43 x 60 feet, five stories high. It is to be used as a plant to crush and separate the ore. All the ore is sorted now as it comes out of the mine. A good deal that is not worth shipping is thrown out, and some is shipped that does not pay. The crushers and other machinery are intended to separate the profitable ore from the unprofitable. The plant will have a capacity of handling 100 tons per day, and will employ over 100 men.

### Work at St. Regis Mill Site.

The work on the canal of the St. Regis Paper Company, at De Ferrett's, is rapidly progressing. About 1,000 feet of canal has been excavated to a depth of 20 feet. More teams and scrapers are being put at work, and by the end of this week about 100 teams and 150 men will be engaged. The railroad switch has been graded for about a half mile. The Knowltons, of this city, have been engaged to lay out and superintend the building of the railroad.

The first installment of Canadian pulp wood for the Dexter Sulphite Pulp and Paper Company arrived at the sand bar in Black River Bay, near the company's works, Friday. The wood is unloaded at Catfish Point, and made into rafts, the water being so low on the sand bar that the barges cannot cross. The steamer Alert is busy towing these rafts across the bar and up the river. This wood is piled along the shore, and acts as stop for the wood from the river drive as it falls from the elevator. The booms in the river were made ready to receive the drive last week. The schooner Two Brothers, of Picton, Ont., was in port Thursday and Friday, with a cargo of pulp wood. Two canal boats loaded with sulphur for the Dexter Company arrived Monday morning.

John Shanon, a young man who is employed at the Carthage Tissue Mill, had the misfortune to have his right arm badly lacerated in a machine Wednesday.

The new machine which was built by the Bagley & Sewall Company for the Carthage Tissue Mill was started up Friday morning and made paper without a hitch. A new switch track has been laid into the mill.

### A Talc Company Loses a Test Case.

The Third Division of the Appellate Court at Albany has affirmed the decision of the lower court in the case of Rose Tetherton v. the United States Talc Company, of Talcville, N. Y. The plaintiff was awarded a verdict of about $4,000 in the Supreme Court. The appeal was really a test case. The defendant operates a talc mine at Talcville, and on February 13, 1897, a mass of rock fell from the hanging walls of the mine and killed six men, among them being Alfred Tetherton. He was thirty-one years of age, and left surviving the plaintiff, his widow, and two small children. Negligence was charged to the defendant in failing to provide a safe place for the men to work, and in allowing the mine to become unsafe and dangerous.

After lingering for many days between life and death, Myron Spaulding died Friday morning, at St. Joachim's Hospital, in this city, aged thirty-eight years and eight months. Mr. Spaulding received the injuries that resulted in his death several weeks ago. He was employed in the Taggart Paper Company's mill at Felt's Mills, and while working round the machinery was caught in the shafting. He is survived by one brother, Fremont Spaulding, and a sister, Mrs. V. J. Van Brocklin, both of Carthage. His father, Asa Spaulding, died at his home in this city last Thursday.

F. M.

### Wood Pulp at the Paris Exposition.

Although, from present appearances, the paper-making industry will not be represented at the Paris Exposition next year, it seems that wood pulp will be represented in the forestry exhibition. Mr. Tarleton Bean, director of the Department of Forestry and Fisheries to the United States Commission at the exposition, and who is well known in New York from having been director of the aquarium at Castle Garden, announces that the exhibit in his department will be remarkable for many reasons.

There will be no display of natural specimens in the forestry division, but in lieu thereof there will be exhibits of finished lumber which have especial uses. In this connection he makes the statement that articles manufactured from wood pulp (and their name is legion) will have much prominence, as this country occupies the chief place among nations engaged in this industry, the forestry exports of the country amounting to $38,000,000 last year. There will be no display, either, of American inventions for making wood pulp, such as grinders, barkers, chippers, etc., or for manufacturing articles from it, although the paper trade is the ninth in importance in this country.

### No Export Duty on Canadian Pulp Wood.

The manufacturers of paper in Canada are indignant over the declaration of Sir Wilfred Laurier, Canadian Prime Minister, that he will not carry out any part of the export duties law relating to pulp. This is taken as a certainty that pulp wood is to continue free. The Prime Minister declared himself last Saturday in the House when Sir Charles Tupper referred to the great future of Canada as a power in the pulp industry, holding that Canada, by enforcing the pulp wood clause of the export duties act of 1897, has a chance now to "transfer from the United States a paper industry of vast proportions."

"I must take exception, at all events," said Sir Wilfred, "to the suggestion which he (Sir Charles Tupper) made to us. I do not believe that either in the future or in the past any policy of retaliation toward the United States would have any effect, or will have any effect, in settling our difficulties with them."

The Canadians are loud in their protest against such a stand, and say that it will tend to put a stop to the investment of British money in timber lands, water powers and pulp mills in Canada.

### A. J. Whiteman in Trouble Again.

Alonzo J. Whiteman, whose escapades of an alleged swindling nature have been recorded from time to time in THE PAPER TRADE JOURNAL, was arrested May 27 upon the ground of passing a worthless check upon a New York hotel proprietor. Whiteman was arraigned in court and was released upon bail for $500, which he furnished in cash, having plenty of money about him. When the day for trial came around, Whiteman did not put in an appearance and his cash bail was declared forfeited. There are said to be many other people in New York who have similar charges to make against him.

Whiteman was at one time the owner of the Dansville Paper Company, Dansville, N. Y., but has recently been connected with a New York financial paper. His present whereabouts are unknown, and he is believed to have left town.

# ABOUT PAPER USERS.

Rev. O. R. Washburn is about to start a newspaper at Linesville, Pa.

The Oakland Journal is a new paper published at Pontiac, Mich., by Turner Brothers.

The Abilene (Tex.) Morning Times has made its appearance. W. D. Girand is business manager.

The Daily Tribune is the name of a new paper shortly to be started in Pottsville, Pa., by R. J. Wilson.

A daily paper, the Evening Press, will be issued in Danvers, Mass., by the Daily Press Publishing Company.

The Windber (Pa.) Era is a new paper which has just been established by Amos Claar, formerly of the Osterburg Echo.

The Springfield (Pa.) Herald is a new weekly to be issued by E. H. Hamblen & Co., as the bulletin of the Springfield Public Market.

Salt Lake, Utah, is to have a new afternoon paper called the Journal. E. A. McDaniel, formerly manager of the Herald, will be proprietor.

Hampton, N. H., is to have two new papers, the Hampton Union and the Breeze, both semi-weeklies. They will be published by John Mahoney.

The Daily Republican is the name of a paper just launched at Stamford, Conn., by Bradley & Cunningham. Irving J. Keyes is the managing editor.

The Daily News is a newspaper to be published in Lawrence, Mass. It will be issued from 400 Essex street, and will be edited by Edward H. Peabody.

N. G. Barter, Mound Cty, Kan., has sold his printing office to J. T. Holmes, after moving it to Pleasanton, and Mr. Holmes will start a new paper at that place.

H. G. Steele, recently editor of the Shamokin Daily Herald, has gone to Dawson City, Alaska, to start a daily paper. He will be backed by a syndicate of Washington and Oregon capitalists.

Hathaway Brothers, printers, Fourth and Library streets, Philadelphia, Pa., are about to make improvements to their building, which will increase their facilities fully one-half. A number of fine new presses are being put in.

Patterson & White, printers, Philadelphia, Pa., have just placed in position a new Miehle press. The firm's plant contains all the latest labor and time-saving machinery, and is said to be a model establishment for high-grade work.

The Seymour (Ind.) Weekly News has been removed to Cheyenne, Wy., where it will be established under the name of the Wyoming State Democrat. John A. Martin, chairman of the Democratic State Committee, and Hon. David Overmeyer, Topeka, Kan., are the backers of the paper.

The Gazette and Land Bulletin is a new paper at Waycross, Ga. It is owned and edited by colored men, and will be issued from Waycross, Brunswick and Tampa simultaneously. The editor-in-chief is Rev. John Watts, Brunswick, and the business manager is Rev. J. M. Milton, Waycross.

The first full carload of news paper ever shipped to Newport News, Va., arrived there May 20, consigned to the Daily Press. The car contained forty-one huge rolls, weighing 27,433 pounds, the average weight of the rolls being a fraction less than 670 pounds. On an iron core running through the centre of each of these big rolls is tightly wound three miles of white paper, in a continuous ribbon. The width of the paper is approximately four feet.

The R. M. Fickett Paper Company, Atlanta, Ga., is a new company which will occupy the entire five story building at 32 Lloyd street. The officers are: R. N. Fickett, president, who was for twelve years connected with the Atlanta Paper Company; R. N. Fickett, Jr., vice-president; E. I. Fisher, secretary, and M. P. Fisher, treasurer. M. P. Fisher will be located at the mills in the East. He is president of two different corporations. E. I. Fisher is a prominent banker in Indianapolis. The management of the local business will be directly under the control of the president and vice-president. Mr. Fickett will continue to travel and visit the trade.

E. P. LINDSAY,
Selling Agent,
No. 169 Congress Street,
BOSTON, MASS.

Odell Manufacturing Co.
HIGH GRADE MANILLA PAPER AND SULPHITE PULP.

TREASURER'S OFFICE
and
MILLS,
GROVETON, N. H.

KATAHDIN PULP AND PAPER COMPANY
LINCOLN, ME.

MANUFACTURERS OF.....
SULPHITE FIBRE

WE MAKE A SPECIALTY OF THE HIGHEST GRADE SULPHITE FOR BOOK, LEDGER, WRITING AND MANILLA PAPERS.

# ACTIVITY IN THE INDUSTRY.

**Paper Manufacturers of the Miami Valley Do Not Look for Any Midsummer Dullness—Paper Flowers in Demand—Harmony Among Straw Paper Men.**

[FROM OUR REGULAR CORRESPONDENT.]

DAYTON, Ohio, June 1, 1899.

There is as great a degree of activity in the paper industry now as there has been at any time in the recent past. The midsummer dullness has not shown itself thus far, nor is it expected for some time to come. A satisfactory condition of trade exists and dealers and manufacturers are alike pleased at the prospects.

The preparations for the proposed Dayton Street Fair and Midway arrangements are going on apace. Makers of tissue paper flowers are in demand. Good workmanship is demanded, and fancy prices will be paid by decorators who are anxious to participate in the flower parade. Colored tissues will be used liberally in ornamenting traps and victorias. A public request has been made that all makers of fancy paper flowers send their addresses to the Board of Trade.

Edward B. Weston, president of the Straw Paper Makers' Association, has returned from the meeting of the executive committee of the association at Chicago, which was held the latter part of the week. He states that all members reported a decided improvement in the condition of trade, and that in most of the centres the conditions were better than they had been for many months.

It is believed—in fact, straw paper men admit—that the method of ordering a week's suspension in the manufacturing department is the only one by which the market can be brought to a normal condition. The straw paper men are said to be in exuberant spirits over the success of their organization and they laugh at reports of dissension.

Many of the manufacturers in the paper and allied lines closed down Tuesday to afford the many thousand workers in Dayton and the Miami Valley an opportunity of observing the day.

George W. Weaver, aged seventeen, and a press feeder in the G. H. Friend Paper Company's establishment at West Carrollton, died the other day from the effect of injuries received the previous Sunday. While riding his bicycle he fell to the ground, bursting a blood vessel, and death resulted from internal hemorrhages.

Daytonians are in receipt of a copy of the Brookville, Ind., Democrat, which is a rather unique production. It is an eight-page paper, and is printed on straw paper of a superior quality. The paper was issued as an advertisement for the Midland paper mills of that town, now owned by W. D. Brodt, formerly of Xenia, where he managed a paper mill for years. The newspaper contains a long descriptive article relating to the Midland mills, which were only recently restarted by Mr. Brodt, who is associated with the Thompson & Norris Company, of Brooklyn, N, Y., a large manufacturer of corrugated papers.

### Gossip About Paper Consolidation.

The opinion prevails here that the promoters of the writing paper combination have met with some serious obstacles. It is difficult to make appraisements and report valuations that meet the approbation of buyers, and each concern is anxious to make as profitable a showing as possible. Certainly some of them have fallen short of expectations. This condition would have been met in any industry. It was predicted at the start that the books of some mills would prove disappointing, and it is believed here in some quarters that this is the case.

It is generally believed here that if the writing paper combine is not perfected there will be no chance for the papeterie men to get together. Locally, interest in the papeterie combine seems to have subsided.

Messrs. Howard Friend, E. B. Weston and W. E. Crume, of the local paper trade, spent ten days recently at Middle Bass angling. They are ardent lovers of the piscatorial sport, and are as successful as an Izaak Walton. Some good hauls are reported.

The marriage of Mr. Joseph W. Mead, of the Mead Paper Company, and Miss Brown, daughter of the widely known wheel manufacturer, was a distinctive social event of the past week. The couple left after the ceremony for New York.

A mortgage for $1,500,000 has just been recorded by the American School Furniture Company in Piqua, Miami County, this valley. It was made for the purpose of floating the 6 per cent. bonds of the company, and required $750 worth of revenue stamps. The mortgage is in printed form, and covers twenty pages. Two members of the trade are interested in this trust—Gen. W. P. Orr, of Piqua, the treasurer of the American Straw Board Company, who will have charge of the school furniture business as manager, and T. B. Boyd, formerly trustee of the Louis Snider's Sons Paper Company.

### Paper Mill Engine Breaks Down.

The Mead Paper Company met with a misfortune the past week which necessitated a shutdown of the supercalenders of the Dayton mill. The accident was the breaking down of the engine, and only manufacturers who have confronted such a situation know the attendant perplexities. Coming at this time, when the Mead Paper Company is rushed to such an extent that it is unable to fill all of its orders, the accident proves the more expensive.

In the matter of the estate of John B. Tytus, the administrator, C. B. Oglesby, has been authorized and directed to sell the interest formerly held by the deceased in certain patents on bag manufacturing machinery and the patent rights connected therewith, at private sale, and to deliver the proper assignment to the purchaser.

The visit of John Shortel to this city, mentioned last week in THE PAPER TRADE JOURNAL, may bear more fruit than at first thought. It will be recalled that he ordered ten beaters and one 120-inch machine, and it is believed that this city and valley will be the recipient of other favors as makers of the equipment of the Chicago Coated Board Company's plant.

Secretary George Shaw, of the Dayton Paper Novelty Company, informs me that business in all departments of the novelty branch, from plain box-making on up, was never better; that the force has been working at night for several months; that more employees were being added to the pay-roll every week, and that an addition of several new printing presses is under consideration. This concern was one of the first in the country to note the improvement due to a general trade recuperation.

Tradesmen in the valley this week were H. C. Demuth, Western man for the Reynolds & Reynolds Company; Col. W. A. Stuart, the veteran from Cincinnati; W. Scott, paper patterns, of New York; Rufus Mowrer, novelties, of Chicago; E. G. Schooly, school-book dealer, of Chicago; G. H. Emery, Chicago straw board manufacturer, and M. S. Goldsmith, of Cincinnati, who supplies county officials with files and records. Messrs. G. N. Bierce and E. L. Shuey, of this city, were in Grand Rapids during the week, attending the International Y. M. C. A. convention, as delegates of the board of directors of the local institution.

M. V.

# ELECTRICALLY PREPARED.

**A Dinner Given by the General Electric Company at Schenectady to Members of the National Electric Light Association.**

A novel entertainment was furnished by the General Electric Company at its Schenectady works on May 25 to the members of the National Electric Light Association, which held its convention in New York last week. The guests were taken up the State on a special train of seven parlor cars, and, after being shown over the gigantic plant, sat down to a dinner in the machine shop.

This dinner was served by the New York caterer Mazetti, who made fame for himself at the Jefferson dinner in the Metropolitan Opera House. The meal was prepared entirely with electrical equipment, loaned for the occasion by the American Heating Company at Cambridgeport, and could not have been more delicious.

Those of the guests who knew the proportions of the Edison machine works when they were located in Goerck street, New York, prior to 1886, were much surprised at what they saw during the inspection of the premises. The plant covers 130 acres of land, and at 5.30 o'clock every night 5,000 hands pour out of the various shops where they are employed. The General Electric Company in its present form arose from the union of the Edison Electric Company and the Thomson-Houston Electric Company in May, 1892. The latter was located first at New Britain, Conn., and afterwards at Lynn, Mass.

### To Promote Commercial Interests.

A practical step toward increasing commerce and manufacture within the State of New York and advancing the interests of our industries in the State has been taken by the New York Board of Trade and Transportation, which is about to call a State Commerce Convention, to be held at some convenient city in the State about September 1 next. It is suggested in the invitations which have been scattered broadcast in every county that each city and village should have a local Board of Trade or Business Men's Association, which shall send a delegate to this convention. Mayors of cities, presidents of villages and boards of supervisors in the counties are invited to attend and appoint delegates where no organization exists.

The questions considered uppermost of importance are taxation, the laws of business corporations, railroad transportation, canal transportation and forest preservation. Among those of more local nature are terminal facilities and terminal charges, including grain elevation at Buffalo and New York, wharf charges, and other port charges which are a tax upon commerce; the improvement of the Staten Island and Port Morris water fronts and the channels connected therewith, the improvement of the water front of the city of New York on Manhattan Island, the setting apart irrevocably of adequate accommodation for the boats that travel the State canals, and the needed improvements at lake ports in this State.

# BOSTON TRADE IS DULL.

**The Approach of Summer, the Close of the Month and the Occurrence of a Holiday Retard the Movement of Paper—Personal Gossip.**

Eastern Office PAPER TRADE JOURNAL,
64 Federal Street,
BOSTON, Mass., May 31, 1899.

The general business of the present week is adversely affected by various influences. After Monday's start a holiday followed. Usually after a holiday the business mail is heavy, but very little increase is noted in the number of letters received to-day. That fact caused a city jobber to remark: "The boom is over, and now we must look for a couple of months of quiet business."

With to-day the month comes to a close, and business is always quiet the last two or three days of the month, buyers holding off to keep their accounts down. To-morrow orders with city jobbers will be more numerous, as the charges of the day can stand open for thirty days before settlement is demanded. Still, the season of dullness is about due, and no business beyond that necessary to supply the limited needs of the day can be looked for.

Mills are reported to be well supplied with orders for the present, but new orders are dropping off, so that manufacturers are beginning to catch up on their delayed orders.

The movement of rags and kindred supplies is rather limited. This is due to the fact that speculative buying for future needs by the writing mills is restricted, in view of the probability of the early completion of the writing paper combination. While no one is willing to admit that he speaks officially, those close to the powers that are shaping the developments say that the completion of the combination will very soon be announced.

### American Devices Abroad.

Advices just received from James J. Lowden, who has been in Europe for a few weeks visiting the English paper mills with the view of introducing his patented paper-mill specialties, are very encouraging. Quite a number of Lowden's patent combined exhaust and live steam regulators have been placed on paper machines in Scotland, and now English paper makers are looking into the merits of this device for drying paper. The West End Engine Works Company, Edinburgh, European agent for Lowden's steam appliances, is having good success in introducing the goods. A few months ago, writes Mr. Lowden, that company placed one of Lowden's boiler-feed regulators on trial in the mills of R. Trillis & Co., Auchmuty, Fife, which gave such good satisfaction that seven more have since been ordered by that firm, together with a Lowden damper regulator. That same company has had two Lowden pressure regulators in use for a year or more. Since Mr. Lowden left for the other side of the water quite a number of inquiries have come to hand from home manufacturers, which will receive his attention on his return. Mr. Lowden is booked to sail for home June 17.

### Personal Gossip.

F. P. Carpenter, treasurer of the Amoskeag Paper Mills Company, Manchester, N. H., who, with his wife and daughter, has been traveling in foreign lands for the past three months, is expected home during the coming week.

H. T. Bartow is on a visit to Bangor this week.

George Young, one of Carter, Rice & Co.'s store salesmen, will join the "benedicts" within a few weeks. The date of the event is set for June 12, and the lady of his choice is Miss Mary Louise Brooks. Both have been in the employ of Carter, Rice & Co. for several years.

Robert C. McQuillen returned last week from a delightful excursion trip. He was one of the Eastern members of the Associated Press who left New York a couple of weeks ago for Chicago.

D. C. Frondsen, representing the American Wood Board Company, of Schuylerville, N. Y., and Ernest Williams, from the Burgess Sulphite Company, of Berlin, N. H., were in town last week.

Charles Wilson, representing the New York Filter Company, is in town to-day.

Trade visitors seem to grow scarcer from week to week, those now reported being W. S. Holt, of Manchester, N. H.; John Mitchell, of Groveton, N. H.; A. N. Lowe, of Fitchburg, Mass.; Chas. C. Mayo, of Lawrence, Mass.; W. J. Raybold, Mr. Bush, of Mittineague, Mass.; Fred. Temple, Charles Dole, of East Pepperell, Mass.; Mr. Taylor, of South Hadley Falls, Mass.; E. M. Adams, of Holyoke, Mass.

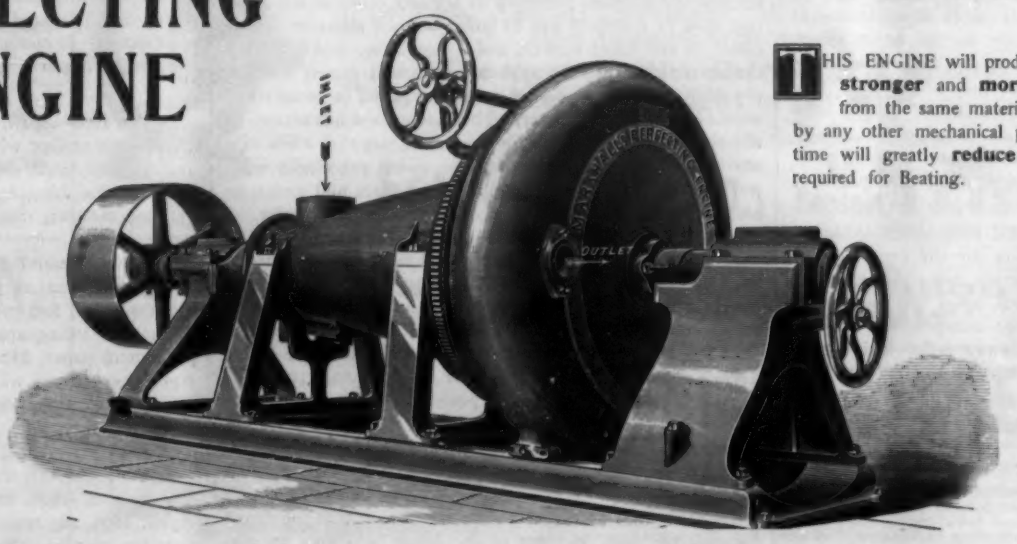
DELZSDERNIER.

The Pusey & Jones Company, Wilmington, Del., is sending to the trade neat, well-made aluminum models of its new style of machine shake. The device is made of drop-forged aluminum, with rolls and frame, and is attached to a 4 by 8 inch rolled plate, in such a manner that the exact movement of the large machine may be imitated in the model by hand movement. Object lessons of this kind cannot but prove effective in bringing improved mechanism to the notice of users.

# MARSHALL'S PATENT PERFECTING ENGINE

Used on all classes of Stock and every quality of Paper

Used in the Leading Mills of the World



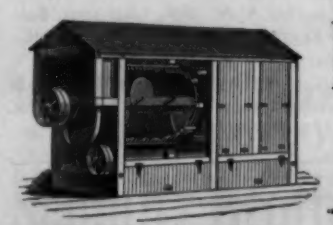

THIS ENGINE will produce a **better finished, stronger** and **more even** sheet of paper from the same materials than can be produced by any other mechanical process, and at the same time will greatly **reduce** the **time** and **power** required for Beating.

BENTLEY & JACKSON,
BURY, ENGLAND,
Near Manchester.

A. KAINDLER,
60 Rue St. Andre des Arts,
PARIS.

**MARSHALL ENGINE COMPANY,**
TURNER'S FALLS, MASS.

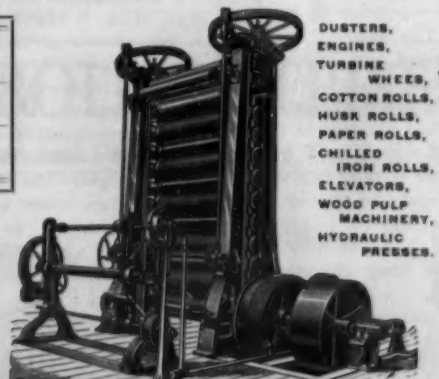
---



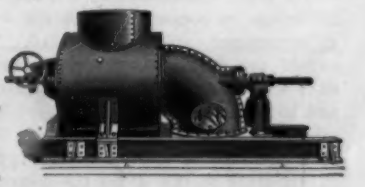
THE TAYLOR PATENT CLEANER AND DUSTER.

# HOLYOKE MACHINE CO., HOLYOKE, MASS.

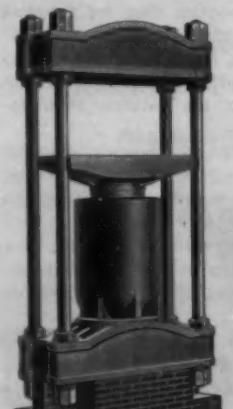
ALL KINDS OF CALENDERS FOR PAPER MILLS, GLAZED PAPER AND CARDBOARD MANUFACTURERS.

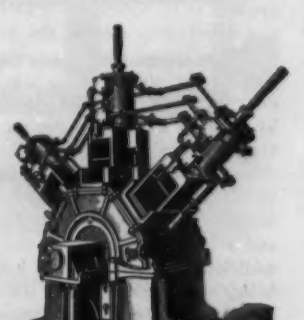


DUSTERS,
ENGINES,
TURBINE WHEELS,
COTTON ROLLS,
HUSK ROLLS,
PAPER ROLLS,
CHILLED IRON ROLLS,
ELEVATORS,
WOOD PULP MACHINERY,
HYDRAULIC PRESSES.



CORRESPONDENCE SOLICITED.

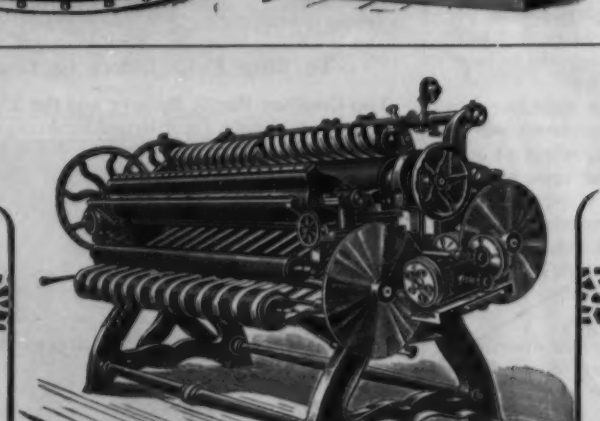




---

THE "HORNE" FRICTION CUTTER

Is in advance of any Cutter in use to-day.



WE HAVE EIGHT RUNNING IN ONE FINISHING ROOM.

After using one Seven Months A CUSTOMER says:

"YOU have the PERFECT CUTTER. We are sure it will save its cost in one year in the saving of waste paper alone."

**THE J. H. HORNE & SONS CO.** MANUFACTURERS OF PAPER MILL MACHINERY, **LAWRENCE, Mass., U.S.A.**

---

# BARK KNIVES

BEST! CHEAPEST!

LORING COES & CO.
Worcester, Mass.

## WALLS PLASTERED WITH PULP.

**Refuse Wood Pulp Valuable for Architectural Purposes—Inferior Fibres May Be Used to Advantage —Ordinary Mortar to Be Displaced.**

A composition pulp plaster, recently invented, forms a substitute for ordinary lime-plaster and equivalent materials and particularly adapted for use in warm moist climates, where the ordinary lime-plaster lacks durability and is rendered non-adherent. A further object is to provide a cheap substitute for plaster which will be not only waterproof but also fireproof and gas-proof, or practically impervious to air. The materials which enter into the composition are bagasse, glue, asbestos, alum and sugar of lead, and also (when it is desired to reduce the quantities of alum and sugar of lead) sunflower pulp (helianthus).

The efficiency of the composition for the purposes for which it is designed depends, however, not only upon the proportions of the ingredients, but upon the method of combining them, and although the composition may be formed without the use of sunflower pulp, it is found to be an advantage to use the pulp for the reason, first, that it may be used in lieu of a portion of the alum and sugar of lead which otherwise would be necessary, and, second, that its fibrous structure increases the bulk of the composition, while the natural gum thereof forms a binding agent to assist the glue in producing a tough fire and gas proof substance.

The preferred process of manufacturing the material is as follows: Of a ton of bagasse (the dry refuse of cane from cane-mills) and sunflower pulp (which may include the stalks, flowers and other parts of the plant) the inventors use three parts of bagasse to one of sunflower-plant, both of these materials being of fibrous quality, but the sunflower plant also including a gum which is of particular advantage in connection with the composition of matter, as hereinafter explained in detail. The fibrous materials named are first ground and macerated and intermixed, after which they are preferably placed in a vat or tank, and to 1 ton of the mixture (dry) is added 25 pounds of saleratus. The mixture of pulps is then exposed to steam at a pressure of approximately 125 pounds, and during its exposure to the steam the mixture is thoroughly agitated, so that all parts thereof may come in contact with the saleratus and steam. The object of this step in the process is to soften the gums of the vegetable substances and thoroughly cleanse the fibres, the steam and saleratus acting in conjunction for this purpose.

After the steaming process has continued for approximately twelve hours the pulp should be thoroughly washed by flowing water into the receptacle in which the pulp is arranged, and agitating the pulp, whereby acids and dirt or other substances foreign to the fibre and gums of the materials, together with the saleratus, may be completely removed. To the washed pulp is now added glue, 10 pounds, and asbestos 100 pounds, the glue being dissolved before addition to the mass, and both the glue and the asbestos being thoroughly mixed with the pulp to cause an even distribution thereof throughout the masses. Subsequent to the mixing of the glue and asbestos there is added alum, 10 pounds, said alum and sugar of lead having previously been dissolved, preferably in hot water, and again the mass should be thoroughly stirred or agitated to insure the proper mixing of the several ingredients.

While kept in bulk, and thus in a moist state, the composition comprising the above-named ingredients will remain in condition to be applied to a wall, ceiling, or other surface for an indefinite length of time; but upon applying the composition more or less thinly to a surface its exposure to the air will result in a comparatively rapid drying thereof, it having been found in practice that the length of time necessary to insure the complete drying and hardening of the composition, as above indicated, is much less than that required for ordinary lime-plaster.

As will be understood from the foregoing description, the body ingredient of the composition consists of the bagasse, supplemented (when used) by the sunflower pulp, but that, while the alum and sugar of lead are employed as fire and gas proofing ingredients, the alum also serving to harden the material when applied, a less quantity of these last-named materials may be used when the sunflower pulp is employed, for the reason that sunflower pulp contains a gum having hardening and fireproofing properties. Furthermore the sunflower gum adds to the adhesive quality of the composition and constitutes an additional binding agent to supplement the action of the glue.

As above indicated, the function of the saleratus, which does not enter into the composition, but must be thoroughly washed out before the addition of glue, is that of a cleansing agent, in conuection with steam, to insure an intimate commingling of the fibres and gum composing the bagasse and sunflower pulp.

The glue obviously performs the function of a binding and also an adhesive agent, while the asbestos forms a fireproof and heat non-conducting element. It should be noted that the glue must be added to the cleansed pulp, and thoroughly mixed therewith prior to the addition of the alum, as a satisfactory distribution of the glue throughout the mass cannot be attained subsequent to the addition of alum or when the alum and glue are added simultaneously to the mass, owing to the fact that the alum serves to congeal or stiffen the glue.

In practice the composition embodying the invention is applied and finished precisely as are any other of the plasters now in common use to laths, boards, stone or brick, metal, or any other surface, and it may be worked to form a surface suitable for the application of wall paper, without the addition thereto of sizing, as is required in connection with ordinary lime plaster. The last named advantage of the improved composition is due to the fact that while of a fibrous quality it is of close texture and is practically non-porous, hence being impervious to moisture and gases, as well as being unaffected in physical properties thereby.

A further and important advantage of the composition pulp plaster resides in the fact of its lightness, and hence the small strain applied thereby to laths in connection with which it may be used in the formation of partition and other walls, and when thoroughly dry the composition is hard and tough and at the same time is flexible, and hence it does not disintegrate or crumble, as does ordinary lime-and-sand plaster, and when exposed to strain it will yield without cracking.

The use of hair, or the equivalent thereof, which is resorted to in connection with lime-and-sand plaster to prevent cracking, is entirely unnecessary in connection with the composition pulp plaster, for the reason that the fibres forming the body element of the latter constitute an efficient binding agent, said fibres being thoroughly interlaced throughout the mass.

### Steam Expansion.

A correspondent of Power writes to that journal, asking: What is expansion one in practice? If cutting off at one-quarter gives four expansions, and cutting off at one-third gives three expansions, and cutting off at one-half gives two expansions, where would you cut off to get one expansion? If you find that to double the volume gives one expansion only, then how do you get four expansions by cutting off at one-quarter?

To this query the editor of Power remarks that the difficulty arises from a misunderstanding of terms often loosely used. If, as stated, cutting off at one-quarter stroke gives four expansions, then logically cutting off at the end of stroke would give one expansion, whereas it is obvious that if steam is carried to the end of the stroke you get no expansion at all.

What is meant when it is said that steam has "had four expansions" is that it has been expanded to four times its original volume, and in this sense, when steam has had one expansion, it would have been expanded to one time its original volume, which involves no change of volume at all.

It is more correct to say that the "ratio of expansion" is four than that "four expansions are used," or that the steam is "expanded four times," but the latter expressions are in common use and will lead to no misunderstanding if by common agreement they are always used to signify the same thing.

### To Ship Pulp Direct to London.

The Canadian Pacific Railway and the Elder Dempster Steamship Company are disposed to arrange a direct line of transportation, it is said, from St. John, N. B., to London, for the shipping of pulp. Neil Turner and Mr. Wahlstein, representing Messrs. Edward Lloyd, Ltd., are urging such a movement with the Dominion Government, as an aid to the big paper and sulphite plant which the Lloyd Company intends to erect on the St. John River and that of Hilyard Brothers in Newfoundland.

### To Make Paper Waterproof.

A new method for waterproofing paper is attracting the attention of dealers in that commodity. It is the invention of a German, and the process is as follows: The sheet is coated on both sides with a solution consisting of 1 part gelatine, 4 parts water and 1 part glycerine. When dry the paper is immersed in a 10 per cent. solution of formalin. After this treatment the paper is said to become impervious even to steam.

### FOREIGN NOTES.

The Russian tariff imposes such a high duty on printing paper that foreign competition is entirely excluded.

Maslianico, in the province of Como, is one of the centres of the paper industry in Italy, and all the mills there have combined into one company, to be known in future as the Cartiere di Maslianico.

In the number of books published Germany is far ahead of any other country. Her quota is about 20,000 books a year, that of France 11,000, Italy 9,000, England 6,000, the United States 5,000.

## OUR FOREIGN TRADE.

**Treasury Statistics Concerning Imports and Exports of Paper, Paper Stock, Manufactures of Paper, Wood Pulp and Chemicals.**

The monthly summary of commerce and finance for April, 1899, prepared by the Treasury Department, has just been issued. It contains the following interesting statistics concerning imports and exports of paper, paper stock, etc.:

**Imports.**

Books, free—April, 1899, $120,509; April, 1898, $137,283; ten months ending with April, 1899, $1,395,116; ten months ending with April, 1898, $1,310,362.

Books dutiable—April, 1899, $100,524; April, 1898, $99,411; ten months, 1899, $159,808; ten months, 1898, $1,155,007.

Paper and manufactures of paper—April, 1899, $244,203; April, 1898, $223,245; ten months, 1899, $2,624,195; ten months, 1898, $2,355,194. Of the imports in April, 1899, there were lithographers' labels and prints, $46,142 and parchment paper, $7,070. For the ten months ending with April these items were $674,315 and $45,513, respectively. Previous to July, 1898, these items were not reported separately.

Wood pulp—April, 1899, 1,917 tons, $45,463; April, 1898, 2,005 tons, $41,656; ten months, 1899, 28,512 tons, $553,762; ten months, 1898, 27,749 tons, $429,674. From Europe, April, 1899, 285 tons, $13,280; April, 1898, 358 tons, $17,953; ten months, 1899, 3,941 tons, $175,497; ten months, 1898, 4,014 tons, $174,033. From British North America, April, 1899, 1,632 tons $32,183; April, 1898, 1,647 tons, $23,703; ten months, 1899, 24,571 tons, $378,265; ten months, 1898, 17,735 tons, $255,641.

Rags, other than woolen—April, 1899, 6,800,888 pounds, $95,022; April, 1898, 3,006,736 pounds, $46,237; ten months, 1899, 45,350,609 pounds, $655,850; ten months, 1898, 40,298,029 pounds, $576,392.

All other paper stock—April, 1899, $109,586; April, 1898, $145,239; ten months, 1899, $1,559,256; ten months, 1898, $1,749,138.

Brimstone—April, 1899, 18,908 tons, $339,165; April, 1898, 15,088 tons, $281,273; ten months, 1899, 107,742 tons, $1,996,333; ten months, 1898, 103,773 tons, $2,334,999.

Bleaching Powder—April, 1899, 11,434,226 pounds, $111,655; April, 1898, 7,679,755 pounds, $88,516; ten months, 1899, 93,048,543 pounds, $979,492; ten months, 1898, 94,094,395 pounds, $1,194,394.

Caustic soda—April, 1899, 680,038 pounds, $10,308; April, 1898, 1,739,047 pounds, $23,678; ten months, 1899, 16,624,977 pounds, $226,506; ten months, 1898, 25,631,752 pounds, $419,719.

Soda ash—April, 1899, 5,304,837 pounds, $43,285; April, 1898, 8,171,746 pounds, $45,452; ten months, 1899, 41,127,280 pounds, $276,042; ten months, 1898, 76,454,216 pounds, $520,487.

**Exports.**

Books, maps, engravings, etchings and other printed matter, April, 1899, $204,647; April, 1898, $169,888; ten months, 1899, $2,228,543; ten months, 1898, $2,088,248.

Paper hangings—April, 1899, $25,599; April, 1898, $22,078; ten months, 1899, $2,228,543; ten months, 1898, $2,088,248.

Paper hangings—April, 1899, $25,599; April, 1898, $22,078; ten months, 1899, $113,397; ten months, 1898, $163,434.

Printing paper—April, 1899, 8,407,381 pounds, $208,748; April, 1898, 8,016,701 pounds, $208,427; ten months, 1899, 79,745,969 pounds, $1,937,352; ten months, 1898, 90,339,355 pounds, $2,286,655.

Writing paper and envelopes—April, 1899, $15,414; April, 1898, $11,412; ten months, 1899, $131,094; ten months, 1898, $139,439.

All other kinds—April, 1899, $260,118; April, 1898, $254,279; ten months, 1899, $2,313,561; ten months, 1898, $2,005,423.

Total, paper and manufactures of paper—April, 1899, $509,909; April, 1898, $496,196; ten months, 1899, $4,495,404; ten months, 1898, $4,504,951.

Wood pulp—April, 1899, 6,007,399 pounds, $85,291; April, 1898, 6,402,458 pounds, $45,465; ten months, 1899, 49,992,562 pounds, $607,143; ten months, 1898, 45,715,022 pounds, $461,295.

### Concerning Straw Board.

The effort to form a straw board combine was renewed this week at a meeting held in New York. Lately the plan has been waning, and the promoters are loath to have it fall through. Crawford Fairbank, in particular, is urging its organization. He was not able to attend the meeting this week, but was represented by Joseph F. Fanning, secretary of the Straw Board Manufacturers' Association, who declined to speak about the results. It is said that a proposition was made to consolidate, with a capital of $6,000,000.

Phœnix, N. Y., will have a new weekly paper. The first number will be issued on July 1.

JAMES M. FITZGERALD,
PAPER AND PAPER MAKERS' SUPPLIES
Engine Sized Flats and Machine Finished Book a Specialty.
DEALER IN
Book, News, Colored and Manilla Papers.
A large line of Paper and Paper Stock always on hand.
OFFICE AND PAPER WAREHOUSE:
413 WEST BROADWAY.
Packing House for Paper Stock;
268 & 269 West Street, New York City.

CHAS. IRWIN,
DEALER IN
PAPER,
CORDAGE,
BOARDS,
BAGS,
TWINE,
ETC
16 State Street,
ROCHESTER, N. Y.

Schmitz Brothers
Merken,
Rhenish Prussia.
Manufacturers of
Greaseproof
.... AND ....
Imitation Parchment

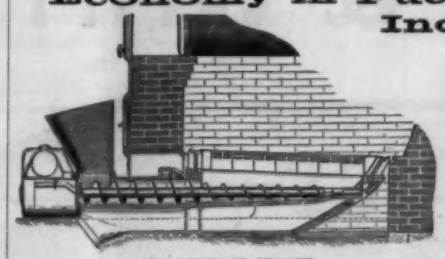
PATENTS Procured promptly and with care. Trade marks, caveats, designs, etc. Moderate fees.
DAVIS & DAVIS,
Opp. Patent Office. WASHINGTON, D. C

THE GLEN MILLS PAPER CO.,
MANUFACTURERS OF AND DEALERS IN....
Parchment Papers
MUSIC PAPERS and RAG SPECIALTIES,
1005-6 Stephen Girard Building,
Mills: Glen Mills, Delaware Co., Pa. PHILADELPHIA, PA.

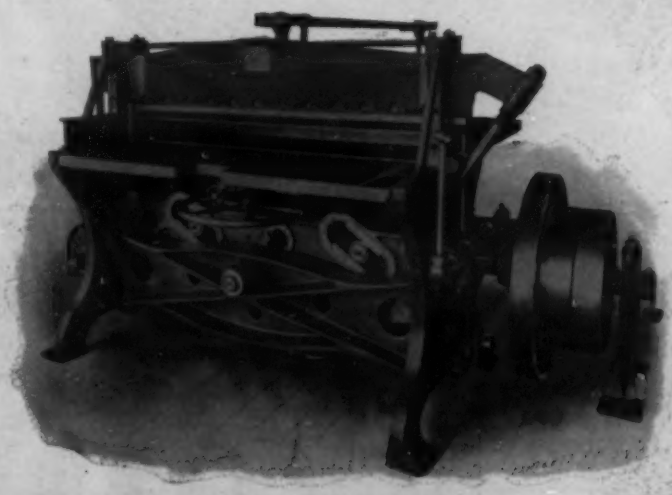
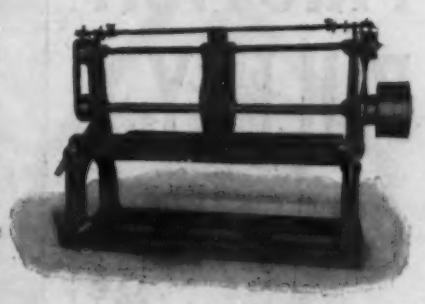
THE ESTY AUTOMATIC SPRINKLER

CLOSED.
Universally Approved and Accepted by Underwriters Throughout the United States.
A MICA SEATED VALVE
that is Non-Corrodible, Non-Adhesive, Impenetrable, Imperishable. Simplest Construction. Most Sensitive to Heat. More Accessible to Sudden Fire.
The most effective distributer of water, whether used upright or pendent.....
For any information concerning Sprinkler Service apply to
Esty Sprinkler Co., 63 Mill Street, Laconia, N. H., U.S.A

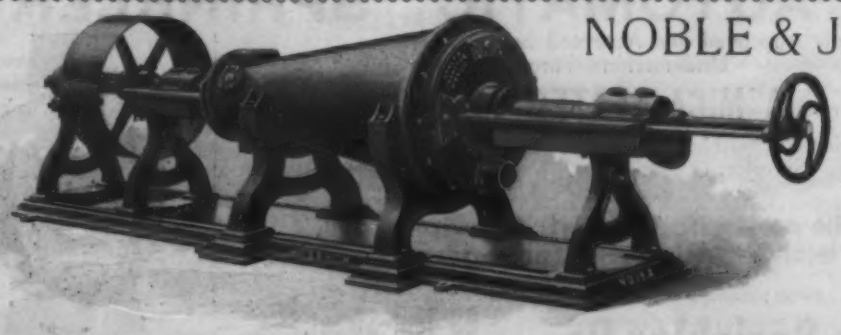
OPEN.

Economy in Fuel! Prevention of Smoke! Increase in Capacity
are not only Claimed but Guaranteed by the use of the
AMERICAN STOKER
COMPACT, POSITIVE, PRACTICAL.

SIDE VIEW OF STOKER.
The fact that our Stoker has no mechanical parts in contact with the fire distinguishes it from all other forms of Stokers and insures a low cost of maintenance. As our system is not dependent upon natural draft, it is especially adapted to meet the requirements of a variable power demand.

END VIEW.
Send for New Catalogue.
USED AND ENDORSED BY SUCH FIRMS AS
Gilbert Paper Co., Menasha, Wis.
Wardlow-Thomas Paper Co., Middletown, O.
The Duncan Co., Mechanicsville, N. Y.
N. Y. & Penna. Co., Johnsonburg, Pa.
Kimberly & Clark Co., Neenah, Wis.
C. H. Howard, Neenah, Wis.
Riverside Paper Co., Holyoke, Mass.
Olcott Falls Co., Wilder, Vt.
International Paper Co., Niagara Falls, N. Y.
Falulah Paper Co. Fitchburg, Mass.
THE American Stoker Company
Washington Life Building, Broadway & Liberty St., New York
Chicago, N. Y. Life Building.

THE SEYBOLD MACHINE CO.,
NEW YORK: 8 and 10 Reade Street.
Main Office and Factory, Dayton, O., U. S. A.
CHICAGO: 347-349 Dearborn St.

Holyoke Cutter—Automatic Clamp.
Insures Economy in Knives. Accuracy of Bevel. Permanence of Temper.

Automatic Knife Grinder.
There is no use trying to escape its Iron Grip.
Users say their output is a revelation in cutters.

IMPROVED FAN PUMP.
THE PUSEY & JONES COMPANY,
WILMINGTON, DELAWARE.
—BUILDERS OF—
IMPROVED
MACHINERY FOR
PAPER MILLS
AND PULP MILLS.



NOBLE & JOHNSTON MACHINE CO., HOOSICK FALLS, N. Y.

*Manufacturers of.....*

JORDAN AND BEATING ENGINES,
IRON OR WOOD TUBS,
LAID OR STEEL BARS AND KNIVES.
BED PLATES AND JORDAN
FILLINGS OF EVERY DESCRIPTION
A SPECIALTY.

Paper Mill Machinery

CORRESPONDENCE SOLICITED.

THE MOORE & WHITE CO.

Fourdrinier and
Cylinder
Paper Machines
For
Book, News,
Straw and News Board,
Building Papers, etc.

Builders of..... Paper Machinery

15th STREET and
LEHIGH AVENUE
PHILADELPHIA
U. S. A.

Friction Clutches
Saturating Machines
Linoleum Printing
Machines.

FRICTION PULLEY AND MACHINE WORKS....

SANDY HILL,
.... N. Y.

MANUFACTURERS
... OF

SCREENS,
WOOD PULP
GRINDERS,
WET
MACHINES..

AND SPECIAL

PULP AND
PAPER MILL
MACHINERY

THE SMITH & WINCHESTER CO.

SOUTH WINDHAM, CONN.

BUILDERS OF..... Paper Mill Machinery

Fourdrinier, Cylinder, and Wet Machines, Calenders, Cutters, Reels, Winders, Screens, Screen Plates, Pumps, Iron, Brass, Gun Metal and Rubber Rolls, Cylinder Moulds, Jordan Engines (3 sizes), and numerous other articles used in the manufacture of Papers.

WE HAVE PATTERNS FOR FOUR DIFFERENT WEIGHTS OF MACHINES, OUR LATEST, No. 4 PATTERN, BEING ESPECIALLY DESIGNED TO FILL THE PRESENT DEMAND FOR EXTRA HEAVY, WIDE AND FAST RUNNING MACHINES. . . . . .

Consult us when in need of the LATEST and BEST in our line. WE HAVE IT!

## ANSWERS TO CORRESPONDENTS,

...BY...

JAMES F. HOBART, M. E.

Members of the trade, in all its branches, are invited to ask questions, answers to which will be printed in this column.
Always give name and address with questions, not for publication, but for use in case it is necessary to write for further particulars.

(76) J. B. B., Towle, Cal.

Question.—We have a pyrometer which is used for taking the temperature of flue gases and other substances hotter than boiling water. Recently I had occasion to use this instrument for testing the temperature of a kettle of hot asphalt, but, to my surprise, I could do nothing with the instrument. Its normal position is in the flue of the boiler chimney, and it stays there all the time when not in use elsewhere.

Upon removing the instrument from the flue it was found to indicate a temperature of about 400 degrees, but commenced to cool slowly soon after it was removed from the flue. Although I waited nearly an hour the index hand would not fall back quite to zero, but remained at about 70 degrees until the instrument was plunged into the kettle of hot asphalt, when, to my surprise, the index at once jumped to zero, then passed it and continued to descend until, becoming alarmed lest the pyrometer be injured, it was removed from the hot liquid, when it at once began to return to zero and soon stood at 70 again. This action was repeated every time I put the instrument into the asphalt. What was the reason?

Answer.—The index did not point to zero when the instrument was removed from the flue for the simple reason that it should always indicate the temperature of the surrounding medium, and if immersed in air it should indicate the temperature of air, which in that instance was probably 70 degrees, thereby demonstrating the accuracy of the instrument.

In regard to the index going below zero when the instrument was immersed suddenly in a hot substance, the explanation is very simple. The temperature is measured, in using a pyrometer, by the expansion of a metal in the shape of a rod or wire, the change in length being transferred to an index or dial, and, at the same time, multiplied to a considerable extent so as to give a greater motion to the index hand. In a pyrometer the case, usually in the form of a pipe or tube, is made to act as the support for the wire or rod. But if both case and wire are of the same material, they will both expand in the same ratio and no indication will reach the dial. Two metals having a different ratio of expansion must, therefore, be used, and the difference in their expansion or contraction is indicated upon the dial.

If the wire has a greater rate of expansion than the tube or case, then the hotter the instrument is made the greater the travel of the index hand. But when the instrument is suddenly thrust into a heated substance the case immediately expands, while the wire, being surrounded by air, which is a poor conductor of heat, is unable to become heated as quick as the case; therefore expansion of the case pulls the wire and the attached index hand backwards over the scale. If left until uniformly heated the instrument would indicate correctly, but until it has time to satisfy that condition, sudden heat applied to the case or tube will indicate less heat instead of more.

(77) M. M. O., Allentown, Pa.

Question.—Are sulphite digesters more liable to explode than steam boilers, and what cause or causes act to occasion such an accident?

Answer.—No, a sulphite digester is no more liable to burst, rupture or explode than is a steam boiler of equal size and operated under similar conditions. If both a boiler and a digester are well taken care of, operated properly and kept in good repair, there is practically no limit to their age of usefulness, except a gradual wearing out of their material, which calls for condemnation and renewal at the time when the factor of safety has become too low to accord with safe engineering practice.

The strength of a digester shell is determined, as heretofore explained in this column, by the thickness and strength of material, the diameter of shell, and the strength percentage of rivets and plate in the longitudinal seams. Practically there is no limit to the size of digesters; it is only a question of securing proper proportions of the parts in order that the cooked charge may be blown off freely and quickly.

The principal and only cause of a digester explosion is that too much pressure was carried for the strength of the shell to withstand. That is the only cause of any explosion of digesters or boilers which has ever happened yet, or ever will happen. The problem of a safe digester, then, becomes a very simple one: First, see that the shell is sufficiently strong to do its work, and has a margin of strength for wear and tear. Second, to see that the digester keeps its strength; that it is not damaged by corrosion; that the acid is kept away from the shell plates and rivets, and that the metal does not deteriorate in any other way. Third, see that the pressure employed never exceeds that safely allowable. These three things carefully attended to, and a sulphite digester or a steam boiler will never explode.

In fact, I never heard of the "explosion" of a digester; they may burst sometimes and tear out a head, scald people and destroy buildings, but that is not an explosion, which means being all torn to pieces and thrown in fragments in every direction. Neither does the simple rupture of a plate, which cracks open and leaks out the shell contents, mean the same as an explosion, but the three terms are sometimes so mixed, or misunderstood, that either accident is called an "explosion."

### Flexoid.

The World's Paper Trade Review remarks that a new substance has been introduced which promises to form a rival to celluloid, xylonite, and similar products. It is said to be transparent, flexible, waterproof, not liable to spontaneous combustion, and forms a good electrical insulator. This substance is named Flexoid. It can be rolled, pressed, moulded or turned into various fancy and useful articles, or made into transparent sheets, which are flexible and retain their flexibility and flatness when immersed in water and dried. The films may be used in photography and for the cinematograph; for the latter forming a fire-proof film, and thus removing the need for restrictions on cinematograph entertainments.

These transparent films, which are also made in a variety of colors, may be used for a waterproof and airproof packing material for packing fancy goods, such as tobacco, confectionery, photographic materials and as substitutes for oiled silks in surgery.

Flexoid is also capable of rendering paper or cloth waterproof without altering their appearance. This valuable property is not possessed by other waterproofing agents, as all hitherto known render paper translucent and alter the appearance of woven fabrics.

Numerous other applications are claimed, among which we may mention the manufacture of sanitary wall papers, imitation stained glass windows, insulators for electrical purposes, stereotype printing plates, artificial silk, grease, air and waterproof materials, etc., and if mixed with pigments substitutes for ivory, amber, jet, vulcanite, etc.

### Glycerine for Sizing.

Glycerine is a substance not largely used in paper making, but one with which it would pay to experiment a little, particularly in connection with sizing making and with coated paper. Glycerine is one of the best softening agents known.


The "Hamilton" Felt.

"Best and Most Economical Made."

The Longest Runs

are always made with the "Hamilton." Once accustomed to its use, you will buy no other. Prices as low as inferior makes are sold at.

In ordering, mention kind of stock used, quality of paper made and speed of machine.

SHULER & BENNINGHOFEN
HAMILTON, OHIO.

THE BEST AND CHEAPEST

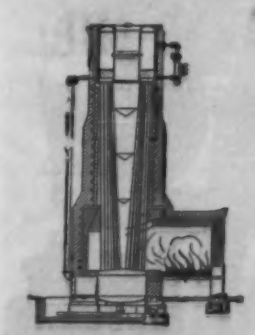
GRATE BAR FOR ANY KIND OF FUEL.

W. W. TUPPER & CO.,
39-41 Cortlandt St., NEW YORK.

THE Superfine Wet AND THE Napless Surface Felts and Jackets OF THE Albany Felt Co.

Have no superiors for giving High Class Finish to fine Writing, Book and Ledger Papers.

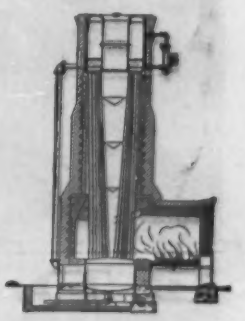
ALBANY, N. Y.



CAHALL VERTICAL WATER TUBE STEAM BOILER

Dry Super-heated Steam.
Small Floor Space Needed.
Safety from Explosions.

THAYER & CO., INC.



Tremont Building, BOSTON. Drexel Building, Philadelphia. Taylor Building, 39 Cortlandt St., NEW YORK.

ESTABLISHED 1842.

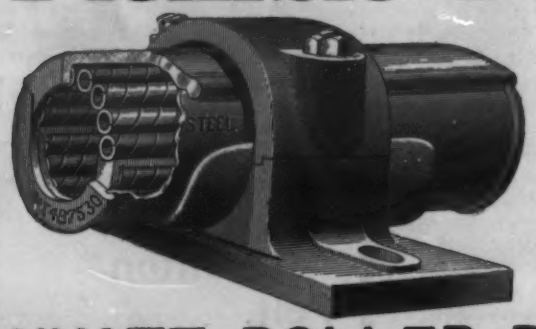
Cheney Bigelow Wire Works SPRINGFIELD, Mass.

MANUFACTURERS ....OF FOURDRINIER WIRES, DANDY ROLLS, CYLINDER MOLDS.

TELEPHONE 372.

Also...
Brass, Copper and Iron Wire Cloth,
Bank and Office Railings and Grille Work.

# Flexible Roller Bearings



SAVE FRICTION AND ADD
TO THE AVAILABLE POWER.

THIS COUNTS RAPIDLY ON

**CALENDERS, BEATERS and HEAVY SHAFTING**

Catalogue and full particulars on application.

**HYATT ROLLER BEARING CO., HARRISON, N. J.**

NEW YORK OFFICE: 133 LIBERTY STREET.

---

# LEFFEL WATER WHEELS

**For Heads of 3 Feet to 2000 Feet.**

Recent tests at Holyoke enable us to guarantee: *The largest power ever obtained from a Wheel of the same diameter. The highest speed ever obtained for the same power. The highest mean efficiency when running from half to full gate.* We guarantee also: *A runner of the greatest possible strength. A gate unequaled in quickness and ease of opening and closing.*

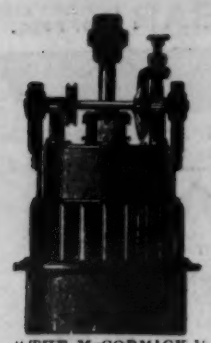
THESE WHEELS ARE SPECIALLY DESIGNED AND ADAPTED TO **PAPER and PULP MILL PLANTS.**

*Tests Show Over 81 Per Cent. Average Efficiency for HALF to FULL Water.*

State your HEAD and send for our Latest Catalogue, Prices and Terms.

**JAMES LEFFEL & CO., Springfield, Ohio, U. S. A.**

---



"THE McCORMICK."

## McCORMICK AND SUCCESS TURBINES,

VERTICAL OR HORIZONTAL.

The McCORMICK Turbine gives more power per diameter with a higher percentage of useful effect from the water used than any other water wheel heretofore made. All sizes, both right and left hand, tested in the Holyoke testing flume.

The SUCCESS Turbine, long and favorably known in the paper trade as a first-class water wheel, possesses valuable features found in no other turbine, and gives a high percentage of useful effect from the water used.

THE McCORMICK and SUCCESS TURBINES are especially adapted for driving Paper and Pulp Mills and are extensively used by the largest manufacturers in the United States and Canada. Parties using wheels which are unsatisfactory and those contemplating the improvement of powers will find it to their interest to confer with us, as we are willing to guarantee results where others have failed, no matter what make of turbines has been tried.

State requirements and send for catalogue.

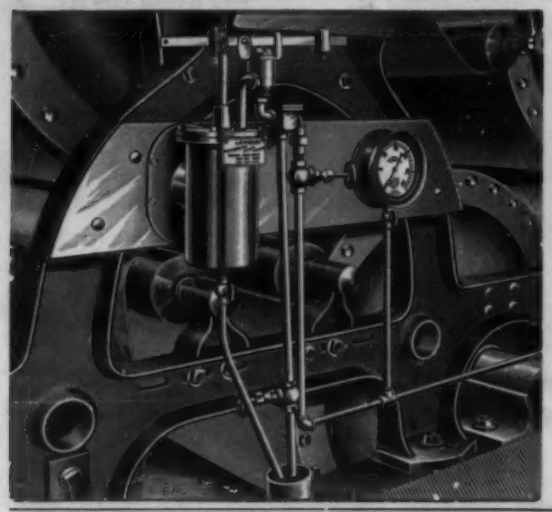
Heavy Power Transmitting Machinery a Specialty.

**S. MORGAN SMITH CO., York, Pa.**

"THE SUCCESS."

---

# LOWDEN'S AUTOMATIC STEAM PRESSURE REGULATOR.



THESE Regulators are used by the largest manufacturers in the country on their paper machines and on their rotary bleachers. We refer to the following paper makers by permission, from the majority of whom we hold the strongest of commendatory letters:

| | | | |
|---|---|---|---|
| GEO. W. WHEELWRIGHT PAPER CO., | 4 | Regulators, | Fitchburg, Mass. |
| CROCKER MFG. CO., | 5 | " | Holyoke, Mass. |
| FRANKLIN PAPER CO., | 3 | " | " |
| NONOTUCK PAPER CO., | 4 | " | " |
| NORMAN PAPER CO., | 4 | " | " |
| RIVERSIDE PAPER CO., | 4 | " | " |
| WAUREGAN PAPER CO., | 3 | " | " |
| MITTINEAGUE PAPER CO., | 3 | " | Mittineague, Mass. |
| AGAWAM PAPER CO., | 2 | " | " |
| JAMES RAMAGE PAPER CO., | 4 | " | Monroe Bridge, Mass. |
| TILESTON & HOLLINGSWORTH CO., | 4 | " | Mattapan, Mass. |
| HOLLINGSWORTH & VOSE CO., | 3 | " | East Walpole, Mass. |
| WATERTOWN PAPER CO., | 2 | " | Watertown, N. Y. |
| TICONDEROGA PAPER CO., | 4 | " | Ticonderoga, N. Y. |
| MARTIN & WM. H. NIXON PAPER CO., | 7 | " | Philadelphia, Penn. |
| JOHN LANG PAPER MFG., | 2 | " | " |
| SYMS & DUDLEY PAPER CO., | 2 | " | Watervliet, Mich. |
| THE JOHN EDWARDS MFG. CO., | 2 | " | Port Edwards, Wis. |
| ALEX. COWAN & SONS, | 3 | " | Penicuik, Scotland. |
| GUARDBRIDGE PAPER CO., | 5 | " | Guardbridge, Scotland. |
| R. TULLIS & CO., | 2 | " | Auchmuty, " |

Send for Descriptive Circular with Full Information.

**JAMES J. LOWDEN,**

PATENTEE AND SOLE PROPRIETOR,

West End Engine Works Co., Edinburgh, Scotland. Everett, Mass.

Sole European Agents.

---

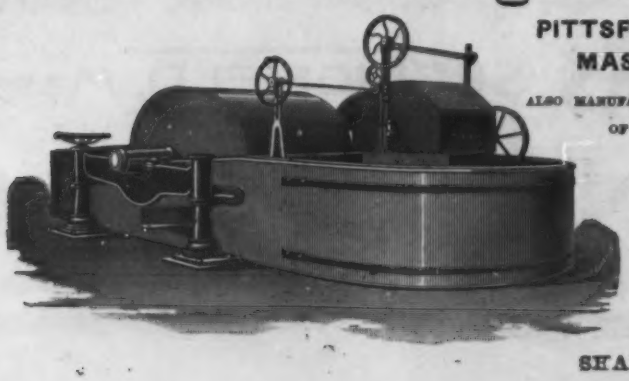
# E. D. JONES & SONS CO.,

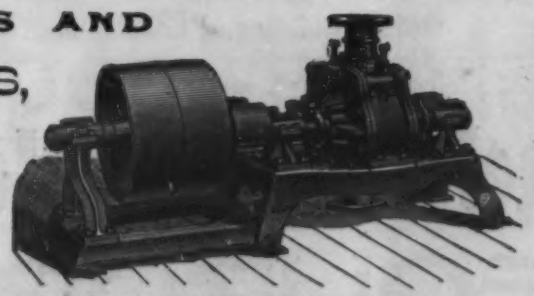
MILLWRIGHTS AND

## Mechanical Engineers,

PITTSFIELD, MASS.

ALSO MANUFACTURERS OF





IMPROVED PATENT RAG ENGINES, DUSTERS, ELEVATORS, ETC.

CROCKER'S

**Rotary Pumps and Turbine Water Wheels.**

SHAFTING, PULLEYS, HANGERS AND GEARING.

---

# Rubber Covered Rollers

Our various consistencies of rubber coverings are adapted for and will give perfect satisfaction when used as press, size or couch rollers on modern fast-running paper machines.

RUBBER-COVERED ROLLERS FOR ALL PURPOSES.

Estimates for rollers complete or for re-covering cheerfully submitted.

Originated and manufactured by

**BOSTON BELTING CO.**

JAMES BENNETT FORSYTH, Mfg Agt. & Gen. Mgr.

High Grade
Rubber Belting, Hose, Packing, Etc.

Boston, 256 Devonshire St. New York, 100 Reade St
Buffalo, 90 Pearl St. Chicago, 109 Madison St.

---

## Lockwood's Directory

For 1899-1900

Will be ready July 1st, 1899.

Orders should be sent in now.

---

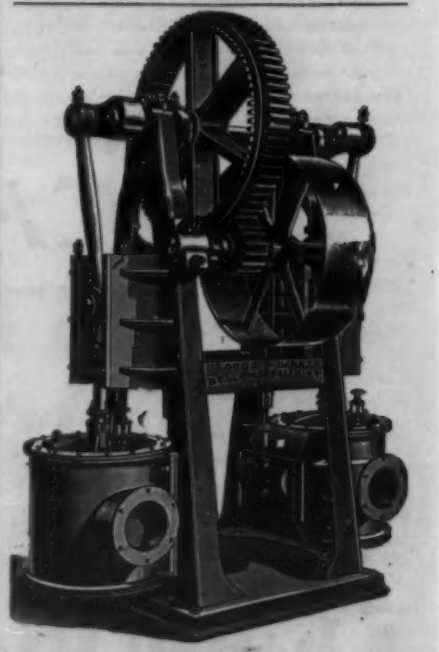
**Don't Guess at Important Matters.**

**Bowsher's SPEED or MOTION INDICATOR IS INDISPENSABLE**

In obtaining a UNIFORM speed of machinery, and is one of the most PROFITABLE little devices ever put in a mill. Will pay for itself in 30 days. Dial 13 in. in diameter. Weight 10 pounds.

The N. P. BOWSHER CO., South Bend, Ind.

---



STYLE A.

## VACUUM PUMP.

Weight of Style A, - - Four Tons.
" " " B, - Eight Tons.
" " " C, - Seventeen Tons

MANUFACTURED BY

**OSGOOD & BARKER,**

Bellows Falls, Vt.,

WRITE FOR DESCRIPTIONS AND PRICES.

## SMOKE PROBLEM SOLVED.

**Increased Economy of Fuel in Industrial Establishments—Cheap Coal and Perfect Combustion—Prosecutions May Be Avoided.**

The problem of burning bituminous coal without danger of violating the law has become a vital one in some portions of the world, both in Europe and America. Prosecutions, actual and threatened, have from time to time attracted attention to this matter, and many inventions have sought to provide smokeless combustion, usually with indifferent results. Recently the prosecution of a paper-making company in Neenah, Wis., was avoided only by means of a compromise.

In a recent report Frank H. Mason, United States Consul-General at Berlin, states that industrial economists in Germany are greatly interested in the recently improved process of Paul Cornelius for the consumption of low-grade fuels. The process consists simply in distributing heated and slightly compressed air through hollow grate bars to the whole lower surface of the furnace, which, being injected upward through the mass of burning fuel, secures equal and perfect combustion and an intense, regular heat from materials that would not be available if burned by ordinary methods. This system has been in practical use since September last, when a steam engine supplied by two boilers was kept in service to drive a dynamo that generated electric current for lighting purposes, elevator, etc.

The two boilers are of the ordinary flue pattern, placed side by side, and their furnaces separated by a dividing wall so that one can be thrown out of use or turned on, as occasion may require. The furnaces are about 10 by 4 feet in area, and the smoke passes by subterranean flues to a stack chimney standing in a central court and rising above the roof of the building. Near the furnaces is located an ordinary fan blower, driven by an electrical motor of one-half horse-power, the speed of which is easily controlled and which drives the air through a 6-inch pipe into a hollow iron chamber about 10 inches deep, which forms the front section of the hearth of the furnaces.

Into the air chamber is fitted one end of the hollow grate bars, which are about 2½ inches in diameter, extend backward the length of the furnace, and are supported by ordinary bearings at the farther end. These hollow grate bars are round on the bottom, but at the top are hexagonal, presenting three faces, each pierced with holes about 2 inches apart and begining with a calibre of one-eighth inch, which increases slightly throughout the length of the bar, to equalize the discharge of air from the gradually decreasing pressure within. The hollow grate bars are laid about 6 inches apart, and there is placed between each pair three solid triangular bars, which assist in sustaining the weight of the burning fuel.

The air being forced by the fan blower into the hollow chamber, is there heated from the fire on its upper surface, then passes into the hollow grate bars and is injected upward in three rows of jets, one vertical and two inclined to right and left, so that the entire under surface of the burning mass resting on the grate is fed constantly by jets of fresh-heated air, which generate from the most ordinary grades of fuel an intense white heat, which can be perfectly controlled by regulating the speed of the fan blower and produce a combustion so natural and perfect that the smoke is entirely consumed.

At the time of my visit the fuel in use was what is known as "coaksgries," or coke dust, the fine slack that comes from screening gas coke, the scrapings of retorts, etc., which has hitherto been regarded as worthless, except for ballasting roads and footpaths. The bed of burning fuel was maintained over the surface of the grate about 5 inches deep, and the fire was white, intense, and evenly distributed. The air current being stopped, the fire at once dropped to a reddish tinge and began to smoke.

Mr. Cornelius's original invention contemplated reinforcing the combustion by impregnating the injected air with a small proportion of cheap oil gas; but experience soon taught that pure heated air was quite sufficient, and, further, that the air chamber, instead of being located at the front end of the furnace, should be at the rear or farther end from the door, where the heat is most intense and whence the current in the grate bars is injected forward—that is, in a direction opposite to the draft of the furnace itself.

The hollow grate bars are of cast iron, made in sections about 3 feet in length, with pierced flanges which enable them to be bolted together at the ends, so that the bar may be lengthened to fit any furnace. Being protected by the current of air, the bars are practically indestructible by fire, those in use since September, 1898, being still in good condition.

With an apparatus so simple and natural in principle as this, some surprising results have been already obtained, although the practical application of the process is in its infancy. The proprietor who has had the apparatus in use since December gives it the highest approval, stating deliberately in his certificate that it has reduced by three-fourths his outlay for fuel, worked with efficiency at all times, and completely eliminated the smoke and soot which formerly, when the best Silesian lump coal was used, blackened the walls and floor of the hotel court and formed a nuisance of which his guests frequently complained.

It was, in fact, for the purpose of abating the smoke and soot plague, rather than of saving expense of fuel, that the system was adopted for trial. The coke dust used as fuel contains a high percentage of inorganic matter, and the yield of ashes is thereby necessarily increased; but, all elements duly considered—cost of fuel, labor of removing ashes, etc.—the fuel cost of running the engine, month by month, as compared with the previous year, has been less than one-fourth of the fuel cost for the same boiler, engine, and electric current, generated with Silesian lump coal.

At the cloth works in Guben the problem was somewhat different: (1) To get rid of the smoke and soot which poured from the furnace chimney and defiled the premises, and (2) to use as fuel a kind of brown coal found in large abundance near the factory, which contains about 2,400 calories, and is therefore a fuel of too low a grade to be used by ordinary means. For this reason the market price of this brown coal delivered at the factory was only 6 cents per centner, of $1.20 per metric ton (2,200 pounds)—a very cheap fuel, indeed, for Germany—but with the Cornelius grate bars it was so absolutely smokeless and otherwise so satisfactory that after three weeks' experience with one boiler the managers had their three boiler furnaces converted to the new system, and after eight months' constant use certify that—

(1) Their saving in fuel by the use of brown coal, instead of Silesian steam coal, has been 110 marks ($26.18) per week.

(2) The smoke and soot from which they previously suffered have been entirely suppressed.

(3) The grate bars remain in as good condition as when first used, and the fire burns easily and under perfect control, so that no injury has resuked to boilers or furnace walls.

Exhaustive tests of the new system have been made by Mr. Gustav Dürr, directing engineer of a large tubular boiler factory at Düsseldorf, who writes in most convincing terms, declaring that the Cornelius system of furnace construction will bring into use as fuel for steam and many other heating purposes, not only the vast product of coke dust from the Westphalian coal and iron district, which has hitherto been used for road-making and ballast for railway tracks, but also the immense brown coal and peat deposits of Germany. This, in many manufacturing districts of this country, will revolutionize the whole economy of heating for steam and other purposes, and German economists are already counting upon the sudden advantage that this new method will give to certain of their industries, which now have to use expensive coal brought from long distances.

Another series of tests, extending over a period of six weeks, has just been made in Berlin, by M. Ternberg, chief engineer of the Government of Sweden, as a result of which negotiations are now in progress for the sale of the Cornelius Swedish patents to the Government of that country, in order to enable the people to utilize the vast deposits of peat, which cover thousands of square miles in Scandinavia, where little or no coal exists and almost the entire supply has to be imported from Great Britain.

From the standpoint of general utility the advantages which seem to have been secured by this system, and which will render it important to the United States, may be summarized as follows:

(1) The smokeless consumption of bituminous slack and other waste of mines and coke works in cities and towns.

(2) The use for steam and heating purposes of the lowest grades of Western bituminous coals, peat, saw-dust, etc., and the vast mounds of anthracite waste that now encumber the mining districts of Pennsylvania.

(3) In naval vessels, notably torpedo boats, to secure such complete consumption of bituminous fuel as to eliminate smoke, which serves to indicate the presence and location of a war vessel to an enemy.

It will be understood that while any fuel—lump or nut coal, for instance—burns fiercely on a Cornelius grate, perfect combustion with consumption of smoke gases requires the fuel to be pulverized, so that for naval purposes lump coal would have to be crushed in order to secure the best results.

---

A number of German business men of Oklahoma have formed a corporation to publish German papers at various points in two territories. The company has a capital stock of $10,000, and the incorporators are: Richard Merrall, Julius Grierser, Frank Messall, William J. Hoenscheidt, Henry Schafer and Herman Harms, all of East Reno, and Frank Menten, Oklahoma City. Mr. Hoenscheidt is the editor of the Volkesblatt, at El Reno. Papers will be established at South McAlester, Guthrie, Oklahoma City, El Reno and Enid.

## TESTING MILL BOILERS.

**Improved Methods of Conducting Efficiency Tests to Determine the Commercial Working Value and Capacity of Steam Boilers.**

The importance of a steam plant to the paper manufacturer is so great that he cannot afford to use for a single year a plant which is not of profitable efficiency. To determine whether the boilers return an equivalent for the labor and fuel expended upon them is as much the duty of the paper manufacturer as is the selling of his product to the best advantage.

The paper makers should have the best of everything; therefore the revised method of conducting boiler tests as advanced by the American Society of Mechanical Engineers should be put in practice in every paper mill. There may be a serious leak in the boiler room which a working test would reveal, to the great benefit of the mill owner.

Determine at the outset the specific object of the proposed trial, whether it be to ascertain the capacity of the boiler, its efficiency as a steam generator, its efficiency and its defects under usual working conditions, the economy of some particular kind of fuel, or the effect of changes of designs, proportion or operation, and prepare for the trial accordingly.

Examine the boiler, both outside and inside; ascertain the dimensions of grates, heating surfaces and all important parts, and make a full record, describing the same and illustrating special features by sketches. The area of heating surface is to be computed from the surfaces of shells, tubes, furnaces and fire-boxes in contact with the fire or hot gases. The outside diameter of water-tubes and the inside diameter of fire-tubes are to be used in the computation. All surfaces below the mean water level which have water on one side and products of combustion on the other are to be considered as water-heating surface, and all surfaces above the mean water level which have steam on one side and products of combustion on the other are to be considered as superheating surface.

Notice the condition of the boiler and its equipment, and record such facts as bear upon the objects in view.

If the object of the trial is to ascertain the maximum economy or capacity of the boiler as a steam generator, the boiler and all its appurtenances should be put in first-class condition. Clean the heating surface inside and outside, remove clinkers from the grates and from the sides of the furnace. Remove all dust, soot and ashes from the chambers, smoke connections and flues. Close air leaks in the masonry and poorly fitted cleaning doors. See that the damper will open wide and close tight. Test for air leaks by firing a few shovels of smoky fuel and immediately closing the damper, observing the escape of smoke through the crevices, or by passing the flame of a candle over cracks in the brickwork.

Determine the character of the coal to be used. For tests of the efficiency or capacity of the boiler for comparison with other boilers the coal should, if possible, be of some kind which is commercially regarded as a standard. For New England and that portion of the country east of the Alleghany Mountains, good anthracite egg coal, containing not over 10 per cent. of ash, and semi-bituminous Clearfield (Pa.), Cumberland (Md.) and Pocahontas (Va.) coals are thus regarded. West of the Alleghany Mountains, Pocahontas (Va.) and New River (W. Va.) semi-bituminous, and Youghiogheny or Pittsburg bituminous coals are recognized as standards. (These coals are selected because they are about the only coals which contain the essentials of excellence of quality, adaptability to various kinds of furnaces, grates, boilers and methods of firing, and wide distribution and general accessibility in the markets.) There is no special grade of coal mined in the Western States which is widely recognized as of superior quality or considered as a standard coal for boiler testing. Big Muddy lump, an Illinois coal mined in Jackson County, Ill., is suggested as being of sufficiently high grade to answer the requirements in districts where it is more conveniently obtainable than the other coals mentioned above.

For tests made to determine the performance of a boiler with a particular kind of coal, such as may be specified in a contract for the sale of a boiler, the coal used should not be higher in ash and in moisture than that specified, since increase in ash and moisture above a stated amount is apt to cause a falling off of both capacity and economy in greater proportion than the proportion of such increase.

Establish the correctness of all apparatus used in the test for weighing and measuring. These are:

1. Scales for weighing coal, ashes and water.

2. Tanks or water meters for measuring water. Water meters, as a rule, should only be used as a check on other measurements. For accurate work the water should be weighed or measured in a tank.

3. Thermometers and pyrometers for taking temperatures of air, steam, feed-water, waste gases, etc.

4. Pressure gauges, draft gauges, etc.

(To be continued.)

## FIRE PROTECTION

Two grades of our Cotton Rubber-lined Fire Hose are designed specially for mill use: **Afmic,** woven from the strongest cotton yarns and standing the heaviest pressures; lined with exceptionally elastic and durable rubber; fabric and rubber cemented tenaciously together—a *very* fine hose; **Carbon**, lighter and somewhat lower-priced, but thoroughly and carefully made, strong and reliable.

We also carry a full line of Rubber and Linen Hose and fittings—nozzles, reels, hose-racks, etc., all of the soundest and best construction. Write for catalogue.

*Belting*
*Rolls*
*Packing*
*Gaskets*
*Water Hose*
*Steam Hose*
*Fire Hose*
*Deckel Straps*
*Specialties*

**NEW YORK BELTING & PACKING CO. LTD**

PIONEERS AND LEADERS, 25 PARK PLACE.

---

**The W. S. Tyler Wire Works Co.**

CLEVELAND, OHIO.

MANUFACTURERS OF

**FOURDRINIER WIRES.....**

Cylinder Faces and Washer Wires.

---

THE "DRAPER" FELT

MANUFACTURED BY

**DRAPER BROS. CO.,**

CANTON, MASS.

WE SOLICIT ORDERS FOR { Press and Pulp / Cylinder / Fourdrinier } **FELTS.**

SATISFACTION GUARANTEED.

---

**THE BABCOCK & WILCOX CO.**

29 CORTLAND ST. NEW YORK

CABLE ADDRESS NEW YORK "GLOVEBOXES" ALL FOREIGN OFFICES "BABCOCK"

**STEAM**

WATER TUBE BOILERS

SEND FOR OUR BOOK "STEAM"

BRANCH OFFICES

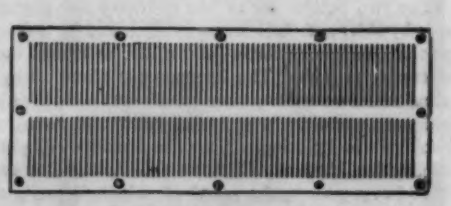
BOSTON 6 OLIVER ST. PHILADELPHIA 1402 DREXEL BLDG. SAN FRANCISCO 25 FIRST ST. CHICAGO 1505 MARQUETTE BLDG. NEW ORLEANS 125 CAMPBELLET ST. PITTSBURGH 1004 CARNEGIE BLDG. CLEVELAND 1501 CUYAHOGA BLDG. ATLANTA, GA. 200 EQUITABLE BLDG. ST. LOUIS MO. 817 SECURITY BLDG. HAVANA, CUBA 31 CALLE DE LA AMARGURA.

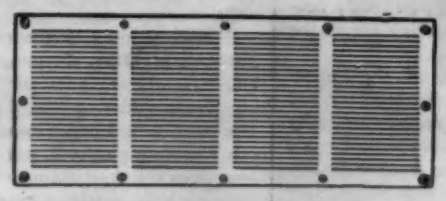
---

**ANNANDALE**

*Screen Plate Co.,*

PATERSON, N. J.





Manufacturers and Repairers of

**SCREEN PLATES.**

Our new Plates are made of the **VERY BEST METAL** and for price and durability cannot be surpassed.

OLD PLATES RE-CLOSED.

---

ESTABLISHED 1832.

**JOHN WALDRON,** New Brunswick, N. J.,

MANUFACTURER OF ALL STYLES OF

**WALL PAPER MACHINERY,**

Coating Machinery for Lithograph, Label, Fancy, Glazed, Book and Sand Papers. Dejonge Patent Sheet Coating Machines. Dejonge Patent Drying Machine for Papers or Other Material in the Sheet.

Also Cardboard Machinery. Hilbers, Staib and Waldron Patent Hanging-Up Machines. Patent Power Reeling Machines for Coated Papers and Cardboard. Embossing Machines, Paper Rolls, Polishing Machines, &c.

*Machinery is Universally Used by the Manufacturers of Above Goods in the United States and Canada.*

---

**ECLIPSE CORLISS ENGINES**

OF ALL STYLES, 40 TO 2,000 H. P.,

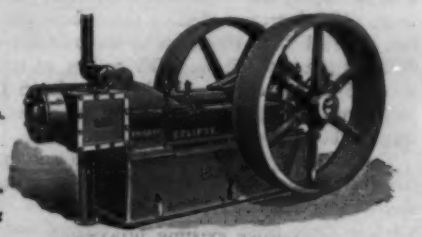
- - Built by - -

FRICK COMPANY, Engineers.

Corliss Horizontal Stationary Engines,
Corliss Vertical Engines,
Condensing or Non-Condensing, Single or in Pairs.
Corliss Compound Engines,
Tandem or Coupled, and Cross Compound.
Corliss Engines for any Service.
*Frick Company's High Speed Automatic Steam Engines.*

Capacity up to 200 H. P. Ask for Illustrated Catalogue. We solicit opportunities to submit proposals for furnishing all kinds of power plants. Address

**FRICK COMPANY, Waynesboro, Pa.**



NEW YORK OFFICE: Taylor Building, 39-41 Cortlandt St.

---

# Efficiency

makes the value of the "Heintz" Steam Trap—lots of others where you get more iron for your money—lots of imitations, too—and some of them look almost exactly like the "Heintz."

Every puff of steam you lose means a loss of more or less money-profits gone. Use the "Heintz" on your outlets, wherever steam escapes, and you will have an increased boiler capacity. We have saved some concerns large sums—more than we dare say. Can save you something, too.

The cost? Of little moment when traps are needed. Booklet "E" tells the starting point. Get one from us.

William S. Haines Company,
136 S. 4th St., Phila.

*"The Heintz—the best—tho' it has imitators."*

© COPYRIGHT, 1907, BY THE HEINTZ CO., N. Y. C.

---

WM. H. HANSELL, PRESIDENT. H. P. FEISTER, TREASURER.

# The Franklin Machine Works,

INCORPORATED,

506 and 508 CUTHBERT STREET,

(ABOVE FIFTH AND BELOW ARCH ST.)

*THIRTY YEARS ESTABLISHED.* .... PHILADELPHIA.

ENGINEERS AND MACHINISTS, AND MANUFACTURERS OF THE FOLLOWING SPECIALTIES:

## Toilet Paper Perforating, Slitting and Rewinding Machinery

*(FASTEST PATENTED MACHINERY IN USE).*

Cigarette Box Machinery (LATEST AND FASTEST).
Paper Bag Machinery.
Rotary Paper and Card Cutting Machinery.
Rotary Paper Slitting and Rewinding Machinery.
Match Box Machinery.

*CIRCULARS UPON REQUEST.*

## THE CHEMIST IN THE PAPER MILL.

**His Valuable Services During the Process of Manufacture—Testing Material to Be Purchased—Determining Ingredients in a Given Sample.**

"What can a chemist do to benefit my business?" is a question frequently asked by paper makers who have not as yet progressed to the point of regularly and continually availing themselves of the services of a chemist primarily installed in their several paper mills. The answer is: "He can do about everything." His work will be a benefit from the time he begins until the end of the business. The work of a good paper-mill chemist begins with his installation in the mill, but it does not end with his leaving. The improvements that are the natural outcome of having a chemist in the mill will continue indefinitely. Once established, the improvements are continuous, and go on for all time.

Briefly stated, the services of a chemist are valuable in three great lines, viz., the testing of samples and determination of raw material, the improvement of manufacturing processes, and the determination of the stock, sizing and loading in a competitor's specialties.

Even in a one-machine mill a good chemist can find full and profitable occupation, and he may protect the mill owner by a rigid determination of the value of all material purchased or tendered for purchase. Every kind of stock may be thus taken in hand by the chemist. Beginning with coal and oil, the chemist can determine those most profitable for each mill to use. He can also test the water used for making steam, and determine the best chemical for use in the steam boilers for the preventing of incrustation or scale. Every lot of pulp that comes into the mill, or is made therein, can be profitably tested and tabulated. The lime, bleach and other chemicals are profitable only by the amount of desired element which they contain when compared with the cost. The colors may be inferior or adulterated, and the chemist will detect the fact in his analysis, and, at the same time, he will be able to advise the color mixer, bleach man or beater tender as to the exact quantity of the several chemicals required in their modified or impure form.

Bleach, for instance, and several other paper-making chemicals should be bought only upon the basis of chemical analysis, the percentage of chlorine fixing the price beyond all dispute as regards the value of bleach for paper-making purposes.

Even the water supplied to a mill may profitably be made the subject of scrutiny by the chemist, particularly when fine papers and delicate colors are to be made, or matched or maintained. A variation in the quantity of lime, magnesia or other elements held in solution is frequently taking place, and the chemist, by detecting and measuring this variation, enables color and quality to be kept up to standard by judicious changes of formula to meet the variation in the water, etc.

In manufacturing, the field of the chemist is wide and his usefulness continuous. His labor and study is continually to improve existing processes, to design new ones, and to prevent waste. In the boiling of stock the chemist can ascertain the exact quantity of material and the elementary constituents thereof best suited for the particular stock used. He can also determine the action of the bleach upon the stock in regard to its decomposing or rotting action, and thereby designate the proper strength of solution and duration of action necessary to produce the desired effect with the least possible damage to the fibre.

In some instances the process could doubtless be hastened by increased strength of solution. In other instances the time could be profitably increased. It is the work of the chemist to shed light upon these little-known problems, and in the study of new treatment and new methods of bleaching coloring or loading he should give many-fold the value of his salary. It may be possible to greatly lessen the cost of producing paper in a certain mill by changing the methods of working certain material. It is the province of the chemist to look for such things, to follow them up and make the necessary tests and determinations. Usually the saving is not made in any radical change, but in the working up of little points too often deemed so insignificant as to be unworthy of notice. It is in the running to earth of these little things that the chemist has his opportunity.

It is the province of the paper-mill chemist to take in hand the constituency of new raw material, to make comparison between it and the old, and then to give to the practical head of the paper-making department such changes in formula and quantities as may be necessary to secure standard results with the varying materials. The average paper-mill man understands very well the value of laying out on paper the various parts of a proposed mill before making a single move to construct it; but the same average mill man—and a good many above the average—never think that the work of the paper-mill chemist is but the laying out of the various processes so as to secure standard results with varying material and processes. But such is the fact. The mill chemist is but the "process draftsman," if such an illustration is admissible!

In manufacturing, the hard, prosaic, every-day work of the chemist is done. It is here that he does his solid work and enables the mill to turn out a standard product and to continually improve that product. But it is in the establishment of new lines of product, in the evolution of specialties, and in the duplication of the product of other concerns that the chemist best shows his value.

Give the chemist a sample sheet of strange manufacture and tell him to ascertain its composition, to establish a formula for its reproduction, and you have put him in position to get in his best work. He will find out the kinds of stock used in making the sample. He will ascertain the material used for loading and finishing the paper, and tell how much of each is needed. He will determine the amount and kind of size used, and tell when and how to apply it, thereby enabling the mill to at once enter upon the making of a product which some competitor has been putting upon the market, perhaps in profitable monopoly.

In the sulphite mill the chemist is invaluable. He watches closely the various processes, and checks any waste, extravagance or failure to reach proper results. He permits nothing to go to waste through improper processing, and seeks to adapt cheaper material for use whenever it is possible to do so. There may be a deposit of inferior limestone near the mill, unfit for use by ordinary methods, while the high-grade limestone used is brought from a distance. The chemist will turn his attention to the impure limestone and try to evolve a method of using it, and—ten to one he does it.

The chemist sees that by proper tests the sulphite liquor is kept up to strength, and that it is made without waste. As yet the chemist has been unable to profitably dispose of waste sulphite liquor, but he will eventually solve the problem. He already has shown how to do it, but unfortunately the cost is too great. Eventually he will solve this problem.

Other wastes are prevented by the chemist. The size water that comes from the machine may contain a valuable percentage of the sizing medium. The chemist readily shows how to detect this loss, and how to prevent it. Other waste points could be enumerated; they exist everywhere—in using color, bleach, lime and clay, and even to the use of stock and water. The chemist lines them all up and directs them to the desired ends with little and constant decreasing loss.

### British Paper Trade Declining.

The paper trade in England seems to be on the decline. During the first quarter of the present year the total imports of paper-making materials were 150,980 tons, a decrease of 5,497 tons as compared with the same period last year. Of chemical wood pulp there were increased imports from Sweden, Norway and the United States, and a decrease of imports from Canada. Of mechanical wood pulp there was a large falling off in the imports from other countries, and a small increase in the imports from Canada. The falling off in the value of paper making materials imported was about $160,000.

Turning from the raw materials to paper itself, we find that during the quarter the imports of unprinted paper amounted to 723,019 cwt., a decrease of 43,649 cwt., while the decrease in value was $190,000. The quarter's imports of printed paper were 28,195 cwt., an increase of 1,286 cwt., and in value a decrease of $1,500. The imports of boards were 506,722 cwt., an increase of 69,989 cwt., and an increase in value of about $70,000.

The exports during the quarter show a still larger falling off. Of writing and printed papers there were exported 133,464 cwt., which is 41,676 cwt. less than for the same quarter last year, and a decrease in value of $175,000. Exports to France fell to 9,895 cwt., decrease 268 cwt.; to United States, to the paltry figure of 873 cwt., decrease 2,286 cwt.; Australia, 56,557 cwt., decrease 33,754 cwt.; "other countries," to 25,861 cwt., decrease 11,248 cwt. On the other hand, exports to India were 21,452 cwt., increase 3,372 cwt.; to British South Africa, 15,839 cwt., increase 1,950 cwt.; and to Canada, 2,987 cwt., increase 558 cwt. Exports of hangings were 26,730 cwt., increase 2,734 cwt.; and of all other description of paper, 65,453 cwt., increase 8,120 cwt. The total export of British paper for the three months was 225,647 cwt., valued at $1,650,000, a decrease of 30,822 cwt. and $135,000. Of paper-making materials there were exported in the three months 12,800 tons—decrease, 1,463 tons.

Rugs and blankets made of paper are being heralded as trade novelties, but a London journal points out that wood pulp, or rather the bark of a tree that is abundant on the slopes of the Andes in Ecuador, has long been used for these purposes by the South American Indians. The bark blankets are usually more than 6 feet long and over 5 feet wide, and are as soft and pliable as though they were made of flannel. They are about the thickness of good flannel blankets, and can be rolled up and put in a strap without hurting or injuring them. The insides are of fine fibres, so joined together by nature that it makes a beautiful blanket, warm enough to be used as a cover and soft enough for a mattress.

## TO MAKE ALBUMEN PAPER.

**A Formula for the Preparation of a Sensitive Surface Suitable for the Use of Photographers—Treatment for Quick Drying.**

A method of making albumen paper is described in the Papier Zeitung by J. M. Eder. A mixture of egg albumen and chloride of silver is applied to Rives or Steinbach paper. About thirty-six fresh eggs are required for 1 litre of albumen, and 9 litres of this are required for 500 sheets of paper. The albumen is first separated from the yolk and whipped up in revolving drums. The yolk is preserved by means of salt, and employed in the manufacture of leather, etc. The whipped albumen is placed in vessels and allowed to stand two to three days, until it is quite liquid. In this condition it is quite slimy and passes with difficulty through paper filters.

Some manufacturers use the albumen after standing a few days, while others consider it better to allow it to stand in deep vessels to clarify for several weeks, until it is almost purified and fermenting, when it is considered to impart a better gloss to the paper. In some cases a second whipping and settling are resorted to when a finer and better paper is required. The clarified albumen is now mixed with the chlorine salts and colors, filtered through a sponge filter and applied to the paper. The composition of the albuminous mixture is of the greatest importance. Generally ammonium chloride or chloride of sodium is employed. Albumen containing a large percentage of chloride is more sensitive and gives softer copies. If it contain very little chloride, it will produce a more slowly but better copying paper.

To 100 parts of albumen 1—8 parts of sodium chloride are added; as a rule the amount of chloride of sodium amounts to ¾ per cent. Solutions of albumen to be used for the preparation of the paper may be made up according to the following directions:

| | Hardwich. I. | Hardwich. II. | Abney. III. | Kleffel. IV. | Liesegang. V. |
|---|---|---|---|---|---|
| | c.c. | c.c. | parts. | parts. | parts. |
| Albumen | 72 | 100 | 72 | 900 | 800 |
| Water | 24 | — | 22 | 300 | 200 |
| | grms. | grms. | | | |
| Ammonium chloride. | 2 | 1.16 | 1.2 | 18 | 15—20 |
| Sodium chloride | — | — | — | 7 | — |
| Alcohol | — | — | 25 | 30 | — |

By No. I. the liquid is thin and facilitates the preparation of the layer. No. II. yields a more varnish-like surface. The addition of alcohol in small quantities is recommended, especially in manufacturing on a large scale. A little acetic or citric acid is also recommended to make the solution more liquid, and to increase the durability of the paper after being treated with silver. Bromine increases the sensitiveness to the detriment of the brilliancy and fineness of the tone of the color of the copies. The addition of ammonia is not recommended, and the less the quantity of water the better the gloss.

To color the albumen, magenta, methyl violet, methylene blue or other aniline colors are used, which fade when exposed to light. The paper is coated with the albuminous mixture in single sheets, by allowing them to float on the surface of the liquid contained in flat cups. One must be careful to prevent the formation of air bubbles. Should any be formed, they are best removed by the aid of blotting paper, after they rise to the surface. The paper is held by two corners, turned downwards and laid upon the liquid, the centre touching first and by degrees both corners, without moistening the back.

After one or two minutes the paper is lifted off, allowed to drain, and then suspended upon rods and strings to dry. The drying takes place in well-ventilated rooms kept at a temperature of about 35° to 50° C. To obtain a good gloss quick drying is desirable. The treated paper is smoothed between polished zinc plates of a glazing machine under high pressure. If necessary a second coat of albumen may be applied, and the operation repeated.

### Elastic Material for Vegetable Parchment.

According to the new process a certain number, say sixteen to twenty pieces, of very thin strips of paper are placed upon one another and then, together, are dipped in a bath of concentrated sulphuric acid, and after leaving the bath are run through rollers, says an exchange.

By that process a thorough adherence of all surfaces with one another takes place, while at the same time the total thickness is reduced. Parchment prepared in that manner is then cut into strips of various breadths, according to the requirements, whereby it is not possible to ascertain from the cuts or fractions the separate layers in the now thoroughly homogeneous mass.

The vegetable parchment thus produced, according to the experiments of the inventor, is perfectly suitable as a substitute for whalebone in dressmaking and corset manufacturing, especially on account of its favorable bearing in relation to the warmth of the body, and on account of its durability and cheapness.

Apart from that, from an industrial point of view, it is an important fact to take into consideration that parchment cut into required lengths, breadths and strengths does not crumble, split or tear, and furthermore that it can easily be trimmed, encased and inserted into casings without in the slightest manner injuring the lining or corset material.

# The Paper Trade Journal.

ESTABLISHED 1872.

DEVOTED TO THE INTERESTS OF

THE AMERICAN PAPER TRADE.

PUBLISHED EVERY SATURDAY

BY THE

**LOCKWOOD TRADE JOURNAL COMPANY,**

150 Nassau Street, New York.

GEORGE W. JONES, GENERAL MANAGER.

Terms of Subscription:

United States, Canada or Mexico.....per year, $4.00
Foreign Countries in Postal Union..... " 6.00
Single copies..... 10 cents

Payments for subscriptions or advertising may be made by draft, express money order, post office order or registered letter. Checks on out-of town banks subject to discount.

**Other Publications of Lockwood Trade Journal Company.**

**American Stationer**, weekly, . . . . . per year, **$2.00**
**Lockwood's Directory of the Paper and Stationery Trades**, annually, . . . . . **2.00**
**Chemistry of Paper Making**, octavo, cloth, 332 pages; net price per copy, delivered, . . . . . **5.00**

**Telephone: 209 Spring.** **Cable Address: Catchow, New York.**

**BRANCH OFFICES.**

**Boston Office**—A. L. DELESDERNIER, 64 Federal Street, Boston, Mass.
**Southern Office**—R. W. BROOKS, 402 Security Building, St. Louis, Mo.
**London Office**—ARTHUR MORRIS, No. 1 Mitre Court, Fleet Street, London, England.

THE PAPER TRADE JOURNAL is the pioneer publication in its field and has for many years been the recognised Organ of the American Paper Trade. As a medium for reaching the trade in all its branches it is unapproached.

NEW YORK, SATURDAY, JUNE 3, 1899.


## *OUR NEW FORM.*

In accordance with the announcement made three weeks ago, THE PAPER TRADE JOURNAL appears to-day in its new form. That this form is far more convenient for the casual reader is obvious, but there is another advantage which the reader will appreciate who may have occasion to refer to back numbers of THE JOURNAL, or who may desire to preserve it in bound volumes. In the old form the first page, which very properly contained the most interesting and important reading matter, was likely to become soiled through handling. In the new form a cover leaf protects the first page of reading matter and keeps it as fresh and clean as any of the inside pages. There can hardly be a doubt that every reader who really values THE PAPER TRADE JOURNAL will regard this as a great improvement.

But while the advantage of the new form to the reader is too plain to need emphasizing, the advantage to our advertising patrons is more important still. Not only will the increased number of pages afford the opportunity for a better distribution of reading matter and advertising, but an advertisement occupying the same space is more likely to attract attention on the smaller page, with fewer advertisements competing with it, than on the larger page of the old form.

It is the confident belief of the publishers that, without any increase in the rates, the change of form will make the advertisements in THE PAPER TRADE JOURNAL at least 25 per cent. more valuable to advertisers than heretofore.

The current volume of THE PAPER TRADE JOURNAL will comprise the issues from June to December. Thereafter semi-annual volumes will begin with January and July.

## *A FOREIGN MISCONCEPTION.*

One of our London trade contemporaries expresses the opinion that the treaty which the Joint High Commission is patching up between the United States and Canada will be greatly to the advantage of the latter, in one respect at least, because it will secure free admission into the United States of Canadian wood pulp and of the wood used in pulp-making. This surrender on the part of the United States is to be brought about by the power of the newspaper press, which, according to our contemporary, is able to dictate to the Government, and which, as the largest consumer of paper, naturally wants to get it cheap.

No doubt the power of the newspapers is great, especially when they are united and consistent, but the trouble in this case is that most of the newspapers of the United States are ardently protectionist, and to make their advocacy of free wood pulp consistent they must abandon the protective system. They can't very well afford to place themselves in the position of advocating free trade when it benefits themselves and opposing it when it benefits some one else. If protection is good for other manufacturers, it is equally good for the manufacturers of wood pulp and of paper, and if there is to be any change in tariff duties the consumers of other products are just as much entitled to relief as the consumers of paper.

So there is not the least likelihood that the treaty, if one is made, will secure a discrimination against the American wood-pulp maker in favor of his Canadian competitor. Wood-pulp making is as much entitled to protection as any other home industry, and it will get it as long as the system lasts.

## *CHEMISTRY IN PAPER MAKING.*

In the complex art of paper making little attention was paid to the chemical phase until many years after the experiments of Robert and Fourdrinier opened the way to the present perfection in the mechanical phase. But in these days of enormous output and small percentage of profit the necessity for securing exact results has become imperative. Problems regarding the composition of fibres, the bleaching of stuff, the loading, sizing and coloring of paper have arisen, the solving of which has required greater knowledge of chemistry than was necessary a few years ago, and thus the work of the chemist has become of as great importance to the paper industry as that of the mechanical engineer. Great progress has been made in the practical application of chemistry to paper making during recent years, but there is much work yet to be done before the chemist stands abreast of the engineer.

Hereafter THE PAPER TRADE JOURNAL will give special attention to the chemistry of paper making. From time to time special articles, written by acknowledged experts—arrangements for which are now being made—will appear in its columns, and it will keep its readers fully informed of the progress made throughout the world in this important phase of the art of paper making.

As its contribution to the war on the trusts the Missouri Legislature has enacted a law which the Attorney-General of that State believes will kill the business of the big trusts in Missouri. The law provides that all corporations, before they may do business in Missouri, must procure a license for which the charge is $10; but, in addition to taking out the license, corporations organized outside the State must practically reincorporate in Missouri by filing their articles of incorporation and setting forth their by-laws and capitalization. As the laws of Missouri prohibit any corporation having more than $10,000,000 capital stock, no corporation organized in another State can do business in Missouri if its capitalization exceeds that sum. It would seem that some of the St. Louis newspapers are liable to be embarrassed by this law in obtaining a paper supply, but no doubt a way will be found of getting around this, as in the case of other trust-scotching laws.

AN event of some interest to the trade at large was announced in the New York newspapers this week. The local typographical union which includes the printers on German newspapers has voted to engage a professor of English to teach its members, so that they can set type in that language. The significance of this lies in the fact that it is probably the beginning of the end of the "German-American" newspapers. That these newspapers have declined in circulation and influence during recent years has been obvious to any observer. That they must ultimately be printed in the language which the large majority of their readers use in their new home was not difficult to perceive. Now that the printers themselves are convinced, the proprietors and editors cannot long remain isolated in a language that is alien to the business, the schools and the literature of the land in which they are published.

OUR export trade in paper has apparently taken a turn for the better. The treasury statistics for April, recently compiled, show that the value of paper exported during that month was about 3 per cent. greater than that of the export of the corresponding month last year. Taking periods of ten months for comparison, the value of paper exported during the period just closed is only slightly less than that of the exports during the similar period in 1897 and 1898, a period of fair activity in the export trade. Exports of wood pulp have increased very materially, as is made evident by comparison of the returns for single months and for the longer periods. Incidentally, it may be said that we imported less wood pulp during April than during the corresponding month last year, but it was of a higher grade.

IN spite of the legislation against trusts in so many States, the making of trusts goes merrily on. As stated elsewhere in our news columns, the combination of leather belting interests, which was hung up for a while and was supposed to be abandoned, is now nearly completed, and may be announced within the next ten days.

## HERE AND THERE.

THE PAPER TRADE JOURNAL is beginning to feel at home in its new quarters, and it wants all its patrons, and members of the trade generally, to acquire the same feeling. They are centrally located, just off Printing House square; are easily accessible from every portion of Greater New York; and, though far above the turmoil and dust of the streets, they are quickly reached by swift-running elevators. When reached, they command a view that is not surpassed anywhere, and that is worth taking a good deal of trouble to see. It is a wonderful panorama, comprising Manhattan Island, the rivers on either side, Brooklyn with its bridge hung high in the air, the Jersey shore as far up as the Palisades, the islands in the bay, and the teeming and picturesque harbor of the greatest seaport city in the world. Resident members of the trade are cordially invited to drop in at any and all times. Visitors from out of town are invited to make the new offices their headquarters while in the city, and to have their mail sent there. They will find desks, stationery, and all other accommodations constantly at their service, and in case of need—for a conference or the like—a private office will be placed at their disposal. It is particularly desired that this shall not be regarded as a mere perfunctory invitation. The new management earnestly desire to establish friendly personal relations with all their patrons, and with all who are interested in the paper trade in any of its ramifications.

Within the range of vision, perhaps (if you use a telescope), "there are others" in the field of paper trade journalism in the United States, but the old, reliable PAPER TRADE JOURNAL is so far in the lead that it is like the famous race in which Eclipse was first and the rest nowhere. Since it was established twenty-seven years ago, as the pioneer in this important field, THE PAPER TRADE JOURNAL has witnessed many attempts at competition, but it has

never yet had a real competitor. There has been more or less skirmishing around the outposts, but no rival has ever succeeded in getting near enough to make an assault upon the fort within which THE PAPER TRADE JOURNAL has intrenched itself by long years of able and loyal service to the makers, sellers and consumers of paper. And its impregnable position as the recognized Organ of the Trade will be maintained and strengthened under the new management. Improvement is their watchword, and their aim will be to keep fully abreast of the progress of the trade and to furnish a weekly *vade mecum* that shall meet and satisfy the wants of the trade in all its branches.

Chicago is one of the great world centres of business activity, but the idea of a paper mill located at Chicago seems incongruous. As a consumer of paper Chicago ranks among the greatest, but one would never think of her as a producer. Nevertheless, Chicago is preparing to join the ranks of the producers. A plant to cost $1,000,000 or more is to be erected on the lake shore, at the foot of North Water street, and in addition to the city's waste paper and rag supply the adjacent Wisconsin forests are expected to furnish an inexhaustible supply of wood pulp. Chicago's well-known energy ought to make it a success, but the experiment will be watched with interest throughout the country.

## LOCAL PERSONALS.

Jean Friese, who recently left Perkins, Goodwin & Co., with whom he was connected for nine years, has removed from Room 125, World Building, to the Vanderbilt Building, No. 125 Nassau street. He is dealing in paper makers' supplies.

W. L. Jockey, with Edwin W. Greenbowe, paper manufacturer and dealer at 15 Beekman street, says that the demand for all kinds of paper, high and low grade, is not letting up, but rather increasing. It is impossible to get orders filled on time.

Thomas Griffiths, of Thomas Griffiths & Co., proprietors of the Lees Steel Mills, in Manchester and Liverpool, England, arrived in New York this week to look over the paper stock market. He is much dissatisfied with the duty on gunny bagging.

According to S. L. Reinhardt, of the Elsas Paper Bag Company, New York, the paper business in the far South is just as thriving as in the far North. Mr. Reinhardt has been traveling through Texas and other Southern States for the last two weeks.

George F. Fowler, president of the Hampden Glazed Paper and Card Company, was in New York part of this week buying new machinery for his plant at Holyoke. Mr. Fowler only pursed his lips when questioned as to the probable success of the writing combine.

Edward G. Murphy has taken a position with the Union Bag and Paper Company, to represent it in one of the Western cities. Mr. Murphy is at present superintending the Bellows Falls mills for the International Paper Company, but will resign in the near future.

Among the passengers on the Cunard liner Umbria, which sailed on Saturday last, was Lyman B. Garfield, bookkeeper in the firm of J. H. Walker, 16-18 Reade street. Mr. Garfield took his vacation last year in Europe, and will divide his holiday this time between England and the Continent.

Major Fred. Ackerman, of Perkins, Goodwin & Co., New York, took his first cruise of the season on Decoration Day, when he navigated his schooner yacht "Lady Evelyn" about the lower Bay and the Hook. Major Ackerman is the most enthusiastic skipper among the paper men of this city.

Luke Fisher, president of the Union Bag and Paper Company, came to New York this week from Chicago and conferred with a number of the stockholders in the company at the Fifth Avenue Hotel. The recent drop in the quotations of the company's common stock, he said, was of no importance.

A well-known jobber dropped into the office of M. S. Flint, agent of the Merrimac Paper Company, in the Tract Society's Building, yesterday grumbling softly. He propounded this conundrum, which has not been answered: "If it takes a mill two months to make two tons of paper, what will it take to make a jobber insane?"

Mr. George Pickles, head of the firm of John Pickles & Son, of Hebden Bridge, England, is now on this side to make contracts with several Canadian wood pulp mills for supplying them with machinery. Other Englishmen prominent in the paper trade who are spending several weeks in the "States" just now are Mr. C. T. Craig, of Henderson, Craig & Co.; Mr. W. H. Reed, Mr. A. Connor and Mr. F. W. Duxbury, the latter of the Spring Vale, Darwen, mills and Lower Darwen paper mills. Mr. Duxbury says that the brittle quality of American news paper has proved a drawback to its use in England, where the printers prefer the softer article.

## NEWS FROM THE MILLS.

Rat Portage, Canada, feels confident that its new pulp and paper mill will shortly be built.

The Green Mountain Pulp Company's log drive has reached the eddy below the falls at Middlebury, Vt.,

The Kenyon Paper Company's new mill at Baldwinsville, N. Y., is practically completed. It will be started up in July.

A new Wheat duster has recently been added to the equipment of the Telulah Paper Company's mill, Appleton, Wis.

Arthur P. Howe, Brattleboro, Vt., has closed the blank book and toilet paper factory which he has operated in that town since last fall.

A new machine, which it is hoped will make over 20 tons of paper per day, has been set up in the Hollingsworth paper mill at South Braintree, Mass.

The work of building the new Centennial Paper Mill, at Lambertville, N. J., is progressing favorably. The mill building will be a modern one in every respect.

The L. L. Brown Paper Company, of Adams, Mass., will not consider the matter of entering a combination of manufacturers of ledger paper, so one of its officers declares.

The Bay State Improved Paper Box Company, of Chelsea, Mass., has purchased a tract of land in that city containing 6,000 square feet, for a site for a large paper box factory.

People of North Rochester, N. H., hope that a leather board mill will soon be built in that town. Persons who are interested in establishing such a plant have been making surveys for a site recently.

A new steam engine has been set up in the Old Dominion Paper Company's mill at Winchester, Va. It replaces one which broke down three weeks ago. It is of the Buckeye type, and is of 50 horse-power.

The Payn box board mill, at Cheltown, N. B., is to be again enlarged, a new beating engine is to be installed, and the foundation for the room to contain it will be laid in the bed of the creek at the rear of the mill.

Robert Pride, who recently purchased the old linen mill property at Appleton, Wis., to turn it into a pulp mill, is removing to it some of the grinders from his pulp mill at Kaukauna, Wis. Most of the equipment will be new.

An important paper mill is being constructed at Coazzo, Piedmont, to be devoted to the production of writing, news and wall paper. The installation will include a wood-pulp mill, with water power as motive force. The region is thickly wooded.

Among the visitors in town this week were J. S. Riegel, of John S. Riegel & Son, Riegelsville, N. J.; H. M. Knowles, of Boston, International Paper Company; J. S. Newton, of the Newton Paper Company, Holyoke, and R. G. Campbell, of the Hurlbut Paper Manufacturing Company, South Lee, Mass.

Melvin Chaffee, a wet machine hand employed in the Missisquoi Pulp Company's mill at Seddon Springs, Vt., was caught between the felt and the roll of his machine a few days ago, and before the machine could be stopped his arm was broken in three places.

E. Meurer, of New York, who is making preparations to build a paper mill at Muskegon, Mich., is negotiating for the Rodgers property in that place for a mill site. A party of engineers has been making soundings on the property in order to locate the foundation of a mill.

Olin Scott, of Bennington, Vt., has recently taken a contract to supply pulp-grinding machinery for a large pulp mill to be erected in Russia. He has also completed plans and specifications for a pulp mill to be erected in Finland. Recently he shipped considerable machinery to Japan.

The Keith Paper Company, Turner's Falls, Mass., has elected these officers: President, A. Pagenstecher; clerk and treasurer, C. M. Burnett; directors, A. Pagenstecher, Jonathan Buckley, C. T. Crocker, B. N. Farren, E. D. Jones, E. Warner, W. H. Mairs, William B. Boorum, Thomas G. Carson and C. M. Burnett.

Cony & Fuller, of Augusta, Me., have secured the contract to furnish 300,000 brick to the Great Northern Paper Company for its new mills at Millinockett, Me., and they are shipping a car-load or more each day. They have also the contract to furnish the Hollingsworth & Whitney Company, of Winslow, with nearly as many.

The Somerset & Kennebec Company, owner of the pulp mills of Benton Falls, Me., proposes to build a paper mill at an expenditure of about $200,000, and has offered to locate it at Fairfield, Me., provided the town will give to the company certain concessions, of which the leading one is permission to extend an electric railroad, owned and operated by the Somerset & Kennebec Company, between Benton Falls and the east shores of the Kennebec River, opposite Fairfield.

G. H. Babson, of Foxcroft, Me., one of the largest pulp wood dealers in the State, has taken a contract to supply the S. D. Company, Cumberland Mills, Me., with a large quantity of pulp wood. Mr. Babson has a large crew of men at work on Katahdin township and elsewhere, and is at present cutting about 200 cords of spruce and poplar for pulp wood daily. The wood has to be cut and the bark removed before the first of July. Last year Mr. Babson handled about 9,000 cords of pulp wood.

The foundations for the new paper mill to be erected at the Manufacturing Investment Company's plant at Madison, Me., have been completed. Excavations are being made for the foundations of the new ground wood pulp mill in the rear of the wood room of the present pulp mill. The water has been pumped out from the space enclosed by the coffer dam and is kept out by powerful pumps. These excavations not only include the foundations, but the deepening of the tail race of the wheel pits. The old water wheels have been removed and new ones adapted to the work required will be installed.

People of Norridgewock, Me., are much interested in the probable outcome of the Waterville and Weeks Mills railroad project. Some time ago an option was secured on the Bombazeen rips property in Norridgewock. Those who secured the option had in mind the erection of a paper mill. It is believed that some of those behind the railroad were interested in the paper mill property, and were pushing the road with a view of securing cheaper freight rates, Now the railroad scheme seems to have been dropped, and it is believed that the new paper mill scheme will also be given up, since a part of the railroad scheme was to push the road through from Waterville to Oakland.

The city of Camden, N. J., and the West Jersey Paper Company, of that place, are in a controversy over the amount of water tolls to be paid by the paper company. The latter is one of the heaviest consumers of water in the city, using over a million gallons a day. The company is paying a water tax of $800, which Manager Safford admits is a small sum for the amount of water used; but he says that should the city adopt the meter system and establish the rate that has been proposed, the company would be forced out of business in a short time. He thinks that inasmuch as the city is offering large inducements for the establishment of a new shipyard, some inducements should be made to retain the industries that have been established in the city for many years.

The York Haven Paper Company, York Haven, Pa., contemplates discontinuing the manufacture of ground wood pulp and the equipping of its mill to make sulphite or soda pulp instead. This will release several water wheels from service, and the power heretofore developed by the company for grinding wood will be converted into electricity. The company has the power under its charter and an act passed in 1895 to distribute and deliver this current to any place it may choose. The new tar paper plant of the Cambria Steel Company, Johnstown, Pa., which is about ready to put in operation, will bring about ten or twelve skilled workmen and their families from Pittsburg to Johnstown. The new plant will manufacture tar roofing papers, tar coating and paint, asphalt roofing papers and asphalt coating and paint, and by-products of the coke plant will then be utilized.

### Steel Ready for Working.

Steel for the use of tool-making and for various other purposes is now furnished by the manufacturer annealed and ready to be worked in the lathe or planer, or other machine tool. This is quite an advantage, especially in the case of paper-mill repair shops, where, as is often the case, generally it might be said, the facilities for annealing are not particularly good. It saves time in annealing and usually in working, since the manufacturer, with his well-appointed facilities, is generally able to anneal the steel better than it is likely to be done in the shop.

EDWIN BUTTERWORTH & CO., MANCHESTER, ENGLAND.
PACKERS OF ALL KINDS OF
PAPER STOCK, COTTON WASTE AND BUFFALO SIZING, WOOD PULP, MOIST AND AIR DRY PULP, SODA AND GROUND PULP,
P 83 GUNNY BAGGING, Etc. ...
James Pirnie, A. A. Demarest, } Managers
OFFICE IN NEW YORK: Vanderbilt Building 132 Nassau St.
Branch Office at Boston: 58 Federal St., C. H. WOOD, Mgr.

WATERBURY
FELTS AND JACKETS
Manufactured by
H. WATERBURY & SONS CO., Oriskany, N. Y.
Adapted to every grade of paper from the finest to the coarsest.
The Largest Manufacturers of Paper Makers' Felts in the World.
Our wet machine or pulp felts are unequaled for durability.
For Writing and Ledger Papers
We warrant a felt equal to anything imported.

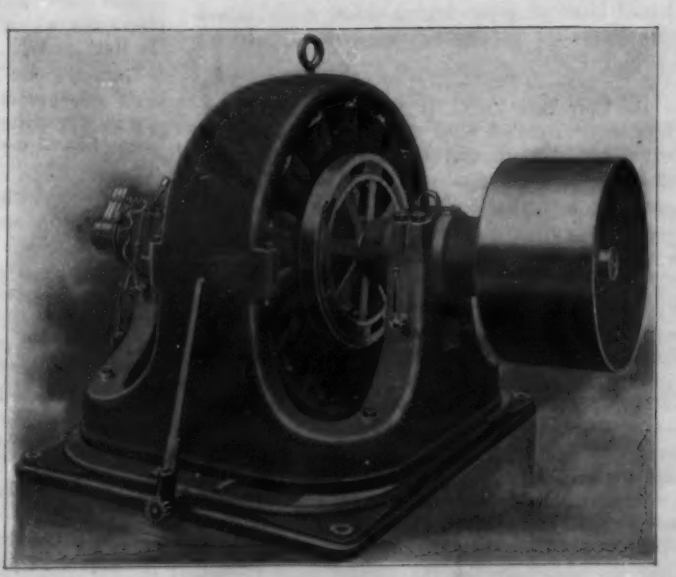
# Westinghouse

## Alternating Current

# GENERATORS and MOTORS.

Westinghouse "Type C" Alternating Current Motor.

For Factory and Mill service the Westinghouse Alternating Current System has stood the test of years. The Westinghouse Induction Motor has given perfect satisfaction. Send for information.



Westinghouse Alternating Current Generator.

# Westinghouse Electric

& MFG. CO., PITTSBURG, PA.

And All Principal Cities in United States and Canada. Westinghouse Electric Co., Ltd., 32 Victoria St., London, S. W., England.

The name **Westinghouse** is a guarantee.

123-B. 1-13-90.

# THE MECHANICS OF PAPER MAKING.

PRACTICAL INFORMATION AND SUGGESTIONS FOR WORKERS IN PAPER MILLS.

EDITED BY
JAMES F. HOBART, M. E.

## WATER FILTERS.

**Pressure and Gravity Systems—Sectional, Mechanical and Automatic Washing—Coagulating, Aerating, Etc.**

Nothing need be said concerning the importance of water filtration for paper-making purposes. That goes without saying, for no matter how pure or good may be the supply and source thereof, filtering always improves the quality of both water and paper. Although many ways of filtering have been devised, and many forms of material used as filtrates, there is but one which has stood the test of time, and that is sand. Pure crushed quartz

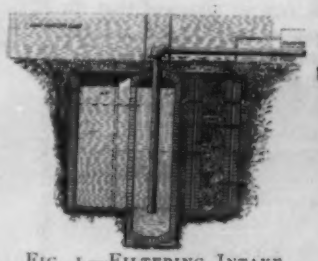


FIG. 1.—FILTERING INTAKE.

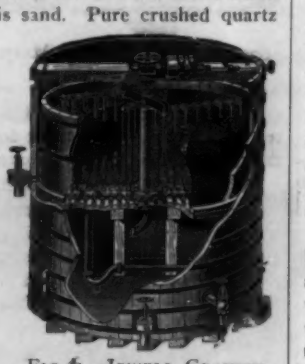


FIG. 2.—JEWELL GRAVITY FILTER.

is the ideal filtering material, although substitutes therefor, in the form of sand of various quality, have been used successfully, the degree of such success depending upon the sand used and its approximation to the standard of crushed quartz.

It is usual for mills and mill owners who have not had experience in filtering to try the scheme of sand filtering by leaching river water through several feet of natural earth bank, into a well or large excavation made alongside the river. This is natural sand filtration, and it can be successfully used when there is room and time enough. A great deal of room is required, as not over 2,000,000 gallons of water per acre of filtering surface can be filtered each twenty-four hours. The disadvantages of this system are the large territory required and the trouble experienced in the ultimate clogging of the earth by filtering material, making necessary the abandoning of the method above described, which is natural sand filtration. The other methods of sand filtration may be termed:

Artificial, or slow.
Mechanical, without coagulants.
Mechanical, with coagulants.

The natural method has been described. Artificial filtration consists of building a flume or pool with a cement bottom fitted with tiles and conducting pipes and channels upon which a layer of sand is placed to filter the water which percolates into the tiles and passages, and is finally led to the pumps. Various schemes have been devised for getting around physical difficulties in the arrangement of artificial filters, and the engraving shows one method where the lack of space necessitated placing the filtering plant beneath the source of supply. In other words, under the river.

In this case the plant was put in the form of a filtering intake, as shown by Fig. 1, and serves the purpose of a natural or of an artificial filter, and possessing the objectionable qualities of both to a certain extent.

Of the various filters described in the following lines, some are better fitted, as are some of the different sys-

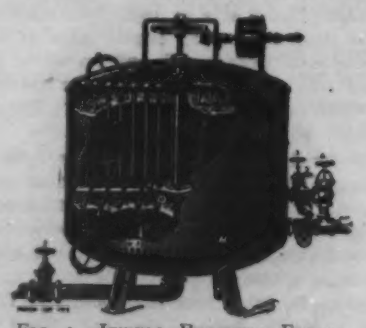


FIG. 3.—JEWELL PRESSURE FILTER.

tems, for the especial work and environment than are others, which, in turn, may be the best in other situations. A choice of systems and filters should then be made after fully considering all the points in person on the spot.

Fig. 2 shows a well-known form of improved filter known as the Gravity Type. It is known as the Jewell Filter, and carries a subsidence basin, stirring apparatus

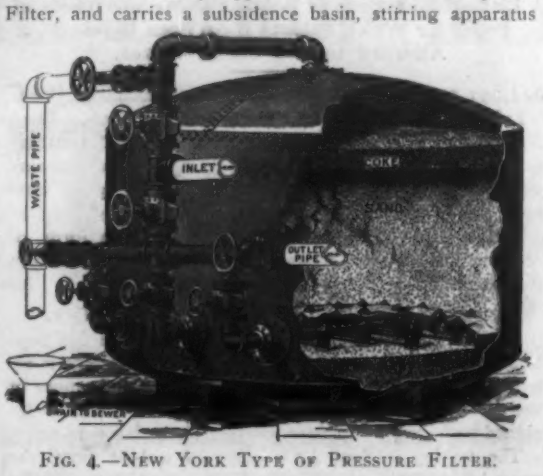



FIG. 4.—NEW YORK TYPE OF PRESSURE FILTER.

and a washing device for cleansing the filtering sand whenever necessary, usually once every day. The stirrers, or agitator bars, are arranged vertically, and pass through the sand about 3 inches apart, thereby thoroughly stirring the filtering material, which is usually from 3 to 4 feet deep. The wash and collecting strainers, of which there are several hundred in each filter, are made of brass with bronze screens and deflecting plates and are all securely copper riveted.

This, and all the mechanical filters described in the following, is so arranged that the filtrate may be worked at will, a proper manipulation of the valves causing a reversal of the water current through the filtering sand while the stirring mechanism is in operation. In this particular filter there is a "rewashing valve" which takes care of the small quantity of turbid water which may be contained in and come from the filtering sand when first starting up after washing. In fact, "rewashing" is almost like filtering to waste enough water to rinse the filter after washing it. The method of cleaning and washing out the subsidence basin is very novel with this filter. The operation is performed at the same time the filter-bed

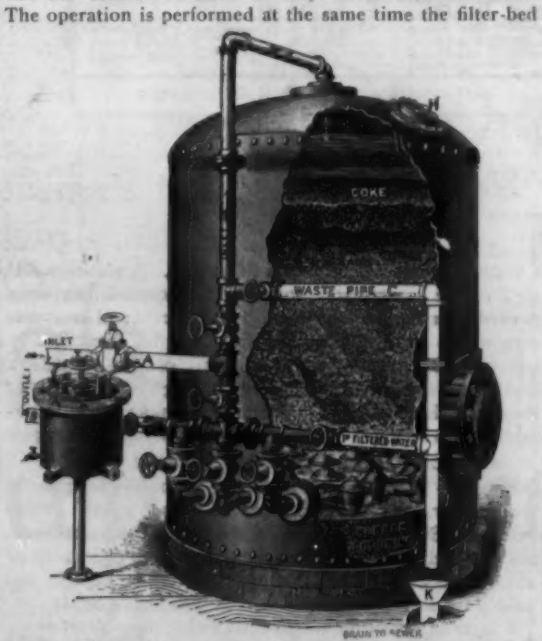



FIG. 5.—SECTIONAL WASHING FILTER.

is washed, and the same water cleans both. The operation is also entirely automatic, as the same shaft which carries the sand agitators extends into the subsidence basin and carries an elbow through which the water issues. As this elbow is rotated with the shaft, it commands every portion of the chamber successively, and the issuing water carries away even the heaviest deposit that can form in the chamber, which is often to the depth of over a foot on the floor thereof.

The Jewell Pressure Filter, as illustrated by Fig. 3, is in construction and principle much like the gravity filter, with the exception that it is made with an iron or steel case and closed at the top, so as to be used under any required pressure. The wash and collecting systems are about the same as in the gravity filter, and in both the stirrers or agitators should not be started until the wash water has rendered the sand loose and semi-fluid.

With the pressure filter, if the filtered water be discharged directly into a stand-pipe or reservoir, the washing may be done with the back pressure by simply opening the necessary connection therefor. The time for washing closed filters is usually taken as once every twenty-four hours, but this depends entirely upon the quality of the water. A very handy way of ascertaining when to wash out is by the use of a gauge on the inlet and another gauge on the outlet pipe. Then, when a certain loss of head shows that the filter is clogged and its capacity is reduced, wash out, irrespective of any regular time therefor.

A recently issued patent covers a device (illustrated elsewhere in this paper) for keeping the difference in pressure uniform at all times between inlet and outlet pipes. There is, however, supplied with both forms of this filter an automatic controller which is attached to the outlet, or pure water pipe, and regulates very closely, by means of a float and valve, the flow of filtered water, and, consequently, the rate of filtration. The alum or coagulating tank may be attached to this filter at will, also to the others hereinafter described.

Another form, known as the New York Filter, and, with the Jewell, controlled by the New York Filter Company, is shown by Fig. 4. It is similar in shape to the Jewell, but has no stirring apparatus, depending entirely upon the action of the water to wash out the filtering material. A layer of coke is superimposed upon the sand through which the water to be filtered passes in a downward direction.

A horizontal form of this filter and other filters is made,

FIG. 6.—NEW YORK TYPE GRAVITY FILTER.

the horizontal form, of course, having the greater capacity, but the operations of filtering, washing, etc., are carried on in the manner already described.

A new form of this filter, or a new method of washing, is shown by Fig. 5, whereby all the pressure of the water service may be condensed upon part of the bed, thereby making the cleansing action of the water much greater than when distributed over a very large area. This is effected by washing about one-third of the filter bed at a time, the strainers being connected to three separate and distinct pipes, which, in turn, are connected to the discharge pipe through three valves, two of which are closed in turn when washing, but all are open when filtering.

Fig. 6 illustrates the New York Filter, which is also constructed without a mechanical stirring device, but is made to wash in four sections.

A type of gravity filter owned by this company, but not as much used at present as the types illustrated above, is the Warren Filter, which is made with a stirring apparatus, which travels along a screw shaft, going to the bottom, then returning to the position shown in the engraving. One of the points made by this filter is that the water receives a coagulant upon entering the settling basin and remains there long enough for the reaction to be completed. It is a peculiarity of all the filters here described that they remove thoroughly all the alum added to the water, and analysis shows less alumina after filtering than before adding the coagulant.

Another type of gravity filter shown by Fig. 7 is known as the Wilson, and is made by the Norwood Engineering

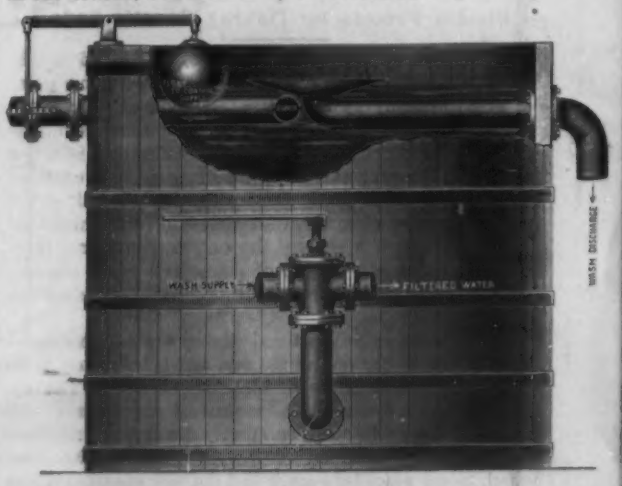



FIG. 7.—WILSON GRAVITY FILTER.

Company. The Pressure Filter, Fig. 8, is made by the same company. In the gravity form the supply is taken directly at the top, and is controlled by a valve and float, the latter being placed directly in the tank. In this filter

the entire operations of washing and filtering are controlled by a single valve, the float taking care of the inlet during the washing operation, the wash discharge being high enough to be uncovered when filtering, and to back up the water level so as to close the inlet valve when washing.

This filter, as shown by Fig. 8, is made for pressure, and in that form is also controlled by a single valve, in this case being of three-way construction.

A gravity filter set in brick, and consisting of several elements, may be constructed, and in fact is the favorite practice of the company making the Wilson filters, and

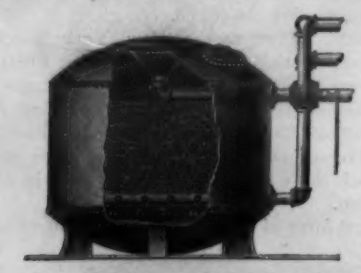


FIG. 8.—WILSON PRESSURE FILTER.

where conditions admit, this form, or several of the other makes of gravity filters connected in battery, seems to be the ideal method of filtering, for the reason that a gravity filter cannot be forced beyond its capacity; therefore poor results cannot be obtained, for there is not the temptation to force the filter beyond its capacity that sometimes occurs when the pressure filter is used.

A patented arrangement for filtration, Fig. 9, recently placed upon the market whereby a good deal of the work usually done by filters is removed therefrom. It is claimed that 60 per cent. of the work usually done is removed

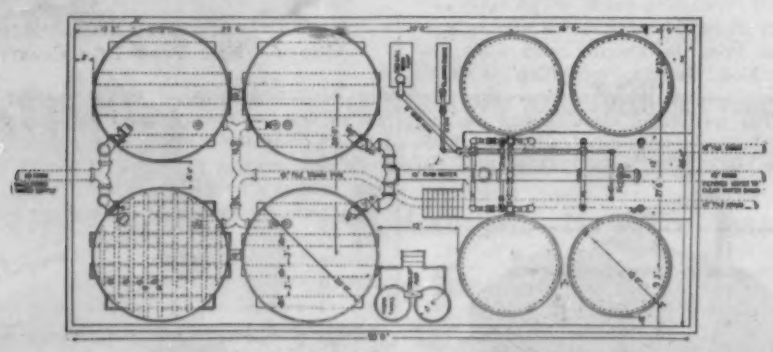


FIG. 9.—STILL WATER SETTLING AND COAGULATING.

from the sand bed of any of the filters above described. This method consists of passing the "raw" or unfiltered water into one or more settling tanks after it has been mixed with alum or some other coagulant.

The point of difference is that the coagulant acts upon still water, in the combination above described, while in other filter systems it acts on water in motion, while passing through the filter. Much of the suspended matter is thereby precipitated in the settling tanks, relieving the filter beds, as stated, of more than half of the work to be done. Aside from the removal of a great amount of mechanical precipitation from the filter beds, there is also removed much of the aluminate deposit, which, more than anything else, renders the filter beds impervious to water and makes frequent washing necessary.

## Rhodin Process for Making Caustic Soda.

It is announced that a company is being formed in this country to manufacture caustic soda and bleaching powder electrolytically by the Hermite-Dubosc-Rhodin process, which is said to be remarkably efficient and economical, as the incidental losses are much smaller than in other methods. The process consists of using an iron containing-vessel, which is partly filled with mercury and within which is another of earthenware that is revolved about an axis coincident with that of the outside chamber. Hermetically sealed into the top of the second vessel are carbon electrodes, which dip into brine placed on the surface of the mercury.

The chlorine, which is freed during the action, passes out through an opening at the top, and is led away, to be used in the manufacture of bleaching powder. The sodium amalgam forms on the surface of the mercury, and passes, partly by diffusion and partly through the mechanical agitation occasioned by the revolution of the inner vessel, to the space between it and the iron chamber where the water extracts the sodium in the form of caustic soda. The iron receptacle is heated to a temperature near the boiling-point to prevent the absorption of chlorine in the brine. This also decreases the electrical resistance and gives the water increased efficiency in taking out the caustic soda from the amalgam.

# PAPER TRADE DEVICES.

**A List of Inventions of Interest to Manufacturers of Paper for Which Patents Have Been Recently Awarded in the United States.**

**624,957 and 624,958.—Tank-Bottom Discharge Door.**

Lebbens H. Mitchell, of Salt Lake City, Utah. Filed November 26, 1897. Issued May 16, 1899. This invention is a device for applying metal fittings to a wooden or metal tank used for leaching colors, settling pulp, sand etc. By the use of this apparatus, the tanks may be quickly opened and emptied. Fig. 1 shows a form of construction for small tanks, and Fig. 2 represents a form for larger work.

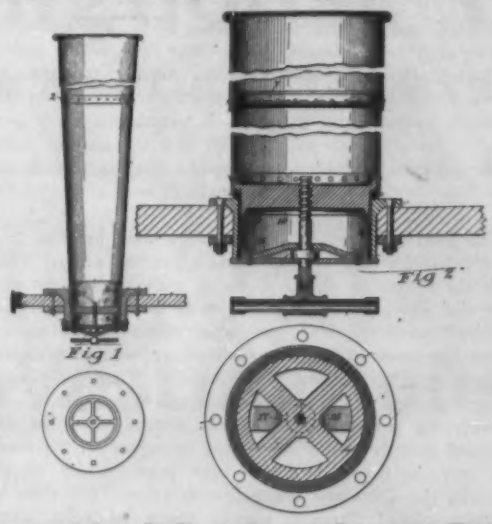
**624,938.—Machine for Producing Wood Fibre.**

Horace M. Hoover, of Perrysburg, Ohio. Filed September 1, 1898. Issued May 16, 1899. This machine is intended to cut wood fibre, but the product is to be more of the nature of asbestos than pulp fibre. The product is designed to be used in plaster, or as a plastering material.

The cutting is done by a gang of wobble saws, the gang being long enough to cut the entire length of the bolt. The cutting action caused by the wobbling of the saws gives a fibre more lengthwise of the wood than would be possible with saws running in the ordinary manner.

**625,255.—Process of Producing Watermarks in or on Manufactured Paper.**

Thomas Archibald Goodchild and Archibald Campbell Tait Bond, of London, England. Filed December 27, 1898. Issued May 16, 1899. This invention relates to improvements in the production of disappearing but repeatedly-revivable watermarks by the aid of electricity. The sheet of paper to be marked is moistened, then laid upon a sheet of blotting paper, which in turn rests upon



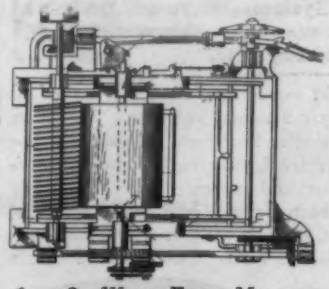

624,957 and 624,958.—TANK BOTTOM DISCHARGE DOOR.

a platinum plate, which forms the anode. A platinum design of the watermark, forming the cathode, is then poured down upon the paper, and a current of one ampere under ten volts pressure is passed for from five to ten seconds, forming upon removal of the cathode a translucent image of the watermark design, which fades as the paper dries and finally becomes invisible. The watermark can be revived at any time by moistening the paper.

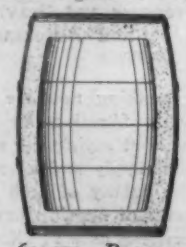
**624,972.—Process of Packing Caustic Alkalies.**

Heinrich Precht, of Neustassfurt, Germany, assignor to the Salzbergwerk Neustassfurt, of same place. Filed June, 11 1898. Issued May, 16, 1899. This process applies to such alkaline hydrates as are apt to deliquesce or absorb moisture from the atmosphere when kept in and used from wooden casks.

A layer of potassium bicarbonate and sodium-bicarbonate, either, or mixed in any desired way, is packed into the bottom of a barrel, and upon this layer the alkaline hydrate is placed, just having been cast in circular blocks. The protecting material is rammed around the sides and over the top of the hydrate and the barrel closed. The substances used for protection absorb the moisture, thus protecting the alkaline hydrate.



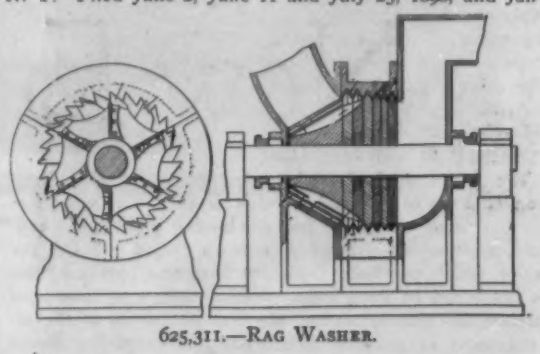
624,938.—WOOD FIBRE MACHINE.



624,972.—PROCESS OF PACKING CAUSTIC ALKALIES.

**625,311.—Apparatus for Disintegrating and Washing Rags.**

James Hunter Annandale, of Polton, Scotland. Filed December 21, 1897. Issued May 23, 1899. This engine is designed to take the place of Hollanders or similar engines, and in it the beating operation is made continuous. As shown in the engraving, the working parts of the device consist of discs with saw-like teeth, and a stationary bed made in the same manner with toothed grooves and ridges, the teeth arranged with decreasing width and depth and of decreasing pitch, and so arranged that the teeth of the disc having the smaller pitch appear between the teeth of the coarser pitched discs.



625,311.—RAG WASHER.

**625,268—Process of Making Indigo-Red.**

Rudolph Knietsch and Paul Seidel, Ludwigshafen, Germany. Filed November 16, 1898. Issued May 16, 1899. In this process of making coloring matter, a phenyl glycocol body is melted with caustic alkali in the presence of a limited quantity of air. The isatinic substance thus obtained is acted upon by an indoxyl body.

**624,976.—Roofing Fabric.**

Robert J. Redck, of St. Louis, Mo. Filed February 16, 1899. Issued May 16, 1899. This substance consists of a sheet of seasoned asphalt roofing-felt, a coating of asphalt being applied to one side of the sheet, and a sheet of burlap laid thereon, then another coating of asphalt is laid upon the burlap, and a layer of gravel put thereon, a narrow strip at one edge remaining ungravelled. The patent also covers two or more thicknesses of burlap and intermediate layers of roofing felt. It also covers the use of sand instead of gravel upon the prepared strips.

**625,092, 93, 94 and 95.—Paper Registering Instrument,** also Slitting and Registering Sheets of Paper, Delivery Guard for Paper Feeding Machines and a Paper Registering Instrument.—Talbot C. Dexter, Pearl River, N. Y., assignor to the Dexter Folder Company, New York, N. Y. Filed June 2, June 11 and July 25, 1898, and January 16, 1899. Issued May 16, 1899. These four patents relate to a group of machines for registering and slitting paper for printing presses or other machinery, and a delivery guard is included, for the use on registering or callipering machines, whereby more than one sheet at a time is prevented from entering the measuring or recording mechanism.

**625,430.—Apparatus for Applying Wadding to Paper.**

Marcus M. Uhlig, Erdmannsdorf, Germany. Filed August 4, 1898. Issued May 23, 1899. This machine takes fleece direct from the cording engine, attaches it to the paper, taking same from a roll, and rewinding the web into another roll, after gumming or otherwise fastening the fleece to the paper.

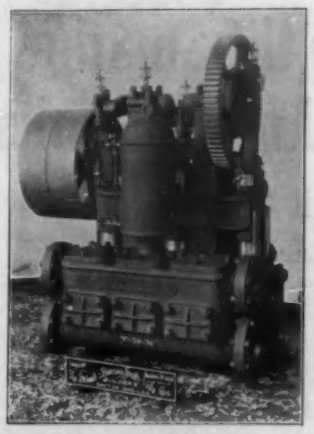
**625,436.—Baling Press.**

Peter K. Dederick, Albany, N.Y. Filed May 7, 1897. Issued May 23, 1899. This power press has a side door and a vertical partition, dividing the press case into independent bale chambers. There is also a traverser, which works in opposite directions, and in uniformity with retainers, while pressing the loose material.

**625,586.—Portable Journal-Smoothing Tool.**

Jeremiah J. Miller, Indianapolis, Ind. Filed January 13; issued May 23, 1899. This tool consists of a two-part hinged cylindrical frame, which is placed around the journal and adjusted thereto by an adjusting screw, which also feeds up the file-like cutting tools with which the frame is provided.

# THE STILWELL-BIERCE & SMITH-VAILE CO.



MANUFACTURERS OF SMITH-VAILE

MAIN OFFICE AND FACTORIES:
DAYTON, OHIO, U. S. A.

## TRIPLEX PUMPS

Designed especially for handling stuff; also adapted for boiler feeding, house supply and general service.

PHILADELPHIA: P. B. Fenlon, Agt., 612 Arch St. BOSTON: G. H. Marr, Agt., 51 Oliver St.
NEW YORK: 141 Broadway.

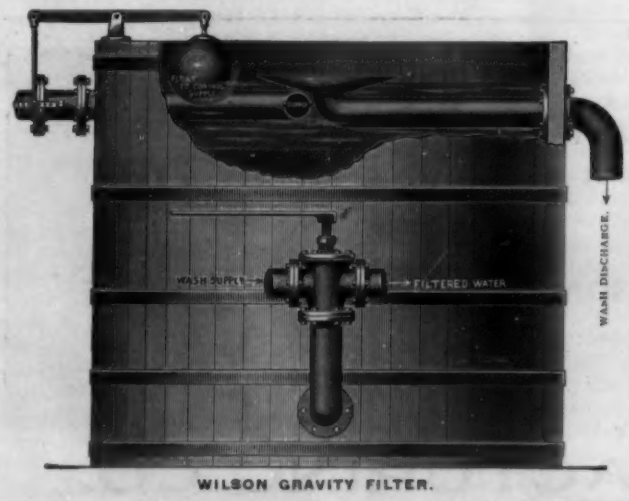
Smith-Vaile Electric Pumps

Stilwell's Combined Feed Water Heaters

Purifiers and Filters Combined

Steam and Power Pumping Machinery

Air Compressors




WILSON GRAVITY FILTER.

# NORWOOD ENGINEERING CO.

FLORENCE, MASS.

... WE MANUFACTURE....

| | |
|---|---|
| Rag Thrashers,<br>Wheat's Imp. Rag Duster,<br>Fan Dusters,<br>Pin Dusters,<br>Railroad Dusters,<br>Rag Cutters,<br>Web Super Calenders,<br>Friction Calenders,<br>Breaker Calenders,<br>Sheet Super Calenders,<br>Plater Calenders,<br>Leather Board Calenders, | Zinc Trimmers for Plater Plates,<br>Trimming and Winding Machines,<br>Slitting and Winding Machines,<br>Rewinding Machines,<br>Color Strainers,<br>Kilbride's Vacuum System or Paper Machine Dryers,<br>Machine Reel with Patent Friction,<br>Belt Power Freight Elevator,<br>Power Boiler Feed and Tank Pumps,<br>Knapp Patent Dovetailing Machines,<br>Cutlery Machinery. |

CATALOGUES SENT UPON APPLICATION

## Paper Mill Equipments

WILSON FILTERS
ELEVATORS
FIRE HYDRANTS

THE WAR IS ENDED, and the enemy's flag pulled down, but the flag of the new pattern

# New England Wood Pulp Grinder

Just out for 1899, designated as No. 16, still flies before the world.

OVER 500 NEW ENGLAND PULP GRINDERS

Have been made, orders for which have been received from the following Countries in America:

**From the States of** Maine, New Hampshire, Vermont, Massachusetts, New York, Pennsylvania, Maryland, Virginia, Kentucky, Ohio, Indiana, Illinois, Michigan, Wisconsin.

**The Canadian Provinces of** Ontario, Quebec, Nova Scotia.

**From the Republic of Mexico,** and the **Island of Newfoundland.**

Also from the following countries in **Europe:** England, Sweden, Austria.

And from the islands of Japan, in **Asia.**

**And the world-wide reputation of the New England Pulp Grinder is that it is THE BEST.**

THESE MACHINES are furnished of any size or style required, and will be built specially adapted for the manufacture of any kind of pulp. Can also furnish all other machinery for the complete outfit of pulp mills, including turbine water wheels, screens, wet machines, sawing machines, barkers, splitters, pumps, presses, conveyors, water strainers, shafting and pulleys, and can furnish surveys, plans and estimates for which I will undertake to furnish such mills, guaranteeing everything to be of the most approved styles and best workmanship, and also guaranteeing its successful operation, so that a purchaser will know in advance just what kind of a mill he will get, just what it will cost him, and just what it will do after he gets it.

We will sell a heavy two-pocket **NEW ENGLAND WOOD PULP GRINDER** for $550, guaranteed to **MAKE MORE PULP OF GOOD QUALITY WITH GREATER ECONOMY OF POWER AND AT LESS COST** for operating expenses than can be done by any other machine on the market.

Will sell three-pocket machine with the above guaranty, adding a stipulation to make a greater aggregate production, using any power from 100 horse up to the maximum which a pulp grindstone can safely stand.

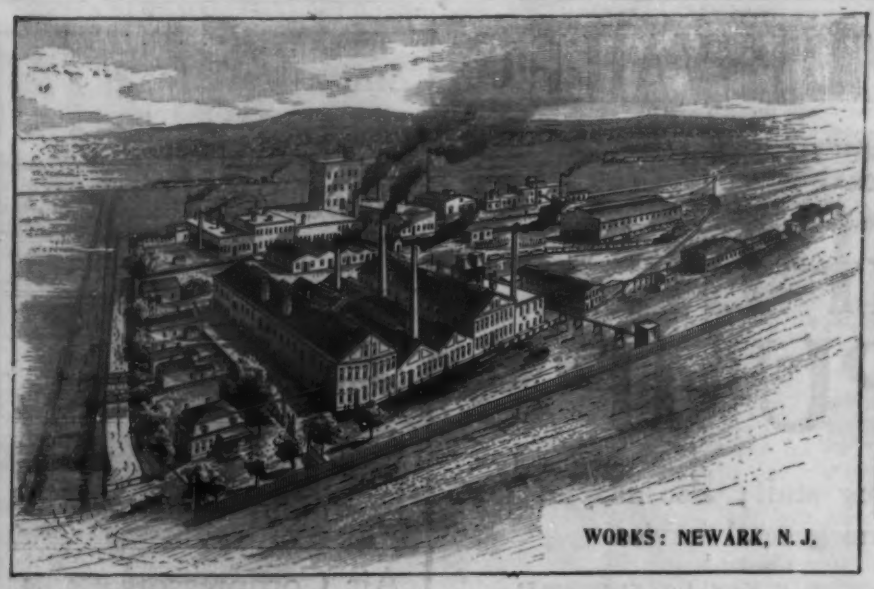
Will furnish Grinders to be run in a competitive test of from 15 to 30 days, with any other grinder on the market, under the above warranty.

Will furnish complete outfit of Pulp Machinery, all of the best, including Grinders, Screens, Wet Machines, Hydraulic Pump, Stuff and Water Pumps, Wood Preparing Machinery, Log Haul, Shafting and Pulleys, all guaranteed to make 10 tons of air dry pulp in 24 hours, of spruce wood suitable for good news paper, at a cost not exceeding $2 per ton, for $5,000, or will furnish outfits for larger mills at prices in proportion.

No Pay Required until you get all you bargain for.

**Write for further information.** No charge for reliable estimates. Can make designs, furnish plans and specifications for Mill to be located anywhere in the United States or Foreign Countries.

OLIN SCOTT,
Bennington, Vermont.




E. No. 1. Very Bluish. | R. S. X. X. Bluish. | R. C. Medium. | No. 4. Reddish. | No. 5. Very Reddish.

# THE HELLER & MERZ CO.

BRANCH OFFICES

PHILADELPHIA
109 North Second St.
CHICAGO
14 N. Clark Street
BOSTON
98 Commercial St.

SAMPLES MATCHED.

## American Ultramarine AND Globe Aniline Works

NEW YORK CITY

## ANILINE COLORS

OF ALL SHADES.

ULTRAMARINE for Paper Makers,

Superior Quality.

# BELTS IN A PLANT

ARE LIKE VEINS IN A HUMAN BODY—

Transmitting

POWER, MOTION, LIFE.

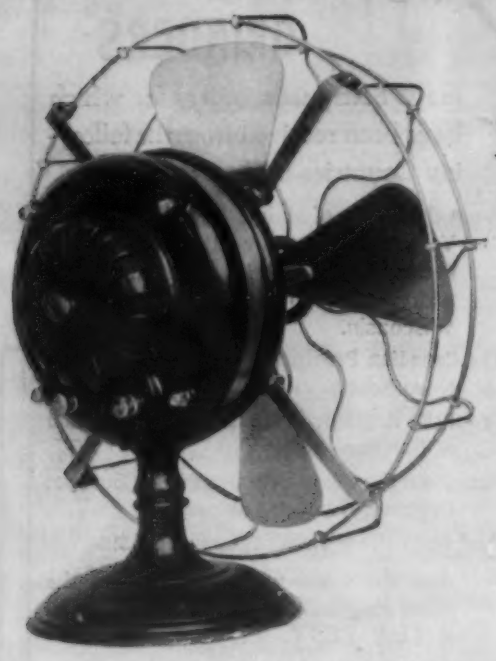
Both must be kept in order.

A BELT with **CLING-SURFACE** requires hardly any attention. Assures absolutely *no* slipping. *Increased* power with belts *slack* and soft. Your old, oily belts can be given the life of new ones. We will tell you how FREE of cost.

## CLING-SURFACE MANUFACTURING CO.

186-192 Virginia Street, - BUFFALO, N. Y.

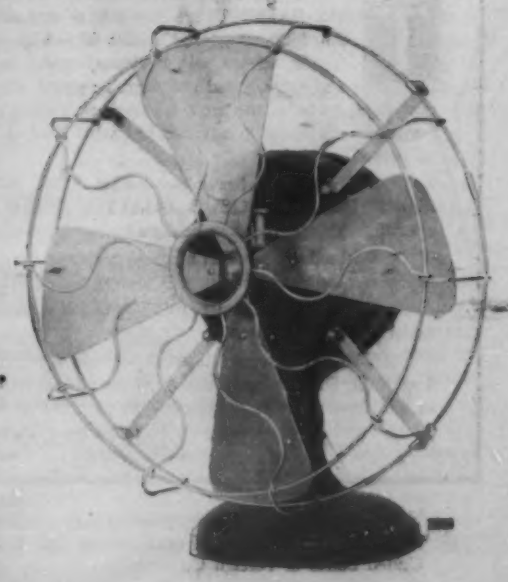
# THE GENERAL ELECTRIC COMPANY'S



# Fan Motors

are serviceable and economical in the ventilation of mills and factories during the hot season.

No other fan motors consume so little current in proportion to the quantity of air set in motion.



ADDRESS

## THE GENERAL ELECTRIC COMPANY. PRINCIPAL OFFICES: SCHENECTADY, N.Y.

SALES OFFICES IN ALL LARGE CITIES.

For all business outside the United States and Canada: Foreign Dept., Schenectady, N. Y., and 44 Broad Street, New York.

For Canada, address Canadian General Electric Company, Ltd., Toronto, Ontario.

## CONCERNING ALKALI.

**Recent Progress in One Branch of Industrial Chemistry—Processes for Obtaining Soda, Chemical and Electrical—The Coal Required—Actual Cost.**

Sodium carbonate has been found native in the extreme north of the State of Sonora, in Mexico, in the mining district of Altar, directly upon the shore of the Gulf of California. This deposit can only be valuable locally, since it is not sufficiently extensive to make any impression on the world's markets. The deposit is spread over an area of 60 acres, and has a thickness of 1 to 3 feet. On top of it is a layer of sandy soil 3 inches thick. The lowest portions are saturated with a solution of the carbonate, and this solution underlies the bed for about 2 feet more.

The crude carbonate contains about 75 per cent. of pure carbonate, according to the Oil, Paint and Drug Reporter, the remainder being for the most part insoluble sandy matter, but there is also some 5 per cent. of sodium sulphate and chloride.

It is estimated that the deposit will yield a thousand pounds of carbonate per square yard, and that the total cost of digging and placing on shipboard will be $2 a ton.

There has been little recent work on chemical methods for making carbonate of soda, but N. F. Bacon, of Peace Dale, R. I., patented a process for obtaining caustic alkali from the carbonate by means of strontium hydrate. The process is carried out under pressure at a temperature of over 100° C. The alkaline carbonate, either in the solid form or as a concentrated solution, is introduced into a solution of strontium hydrate. The chief advantage is that strontium hydrate is considerably more soluble in hot water than in cold, and can be obtained in a strongly concentrated solution. The strontium carbonate is reconverted into oxide by ignition.

A more important process, apparently, is that which seems to be in use by the United Alkali Company, Ltd., of Liverpool, and which, though they have patented it, is very similar to the old Loewig's process.

Ferric oxide, preferably roasted iron pyrites, after the extraction of the copper, is heated in a Mactear furnace and a concentrated solution of sodium or potassium carbonate is gradually added, with constant stirring. The dried mass is transferred to another furnace, and, strongly heated, produces a ferrate. The product is lixiviated and the water decomposes the ferrate, producing caustic alkali and ferric oxide, which can be used again. The concentration of the soda solution thus obtained is very much greater than of that produced by lime. The soda is also purer. The process is better adapted for use in connection with the ammonia soda process than with the Le Blanc process, for the tank liquors, in the latter case, are quite diluted, and so a great deal of evaporation is necessary before the calcining. Loewig's process is usually considered more expensive than the old lime method, and it is not evident whether the United Alkali Company has succeeded in cheapening the process, or relies on the greater purity of the caustic alkali to be an offset to the greater cost.

The recent advances in the alkali industry have been along the electrolytic line. In Britain less alkali is being made by the Le Blanc process and the electrolytic processes are being adopted. There are a number of difficulties attending the electrolytic process. In the electrolysis of common salt the chlorine is very destructive to the anode. The hydrogen, which gums at the cathode if allowed to escape through the liquid, stirs it up and so brings the caustic soda into the sphere of action of the chlorine. It is necessary to prevent the mixing of the caustic soda and the chlorine, for these two interact, forming hypochlorite and chlorate. In any case the chlorine is liable to diffuse, and efforts are made to prevent the diffusion. One method employed is the use of a porous diaphragm between the anode and cathode. The diaphragm must offer very little resistance to the electrical current, and should at the same time be unattacked by either caustic or chlorine. Nearly all of the diaphragms have a basis of asbestos, and the one which seems to have reached the greatest perfection is that of Hargreave and Bird. The composition and mode of construction is kept secret to a certain extent, but it is known that the basis is asbestos, with which is incorporated a silicate composition.

In some processes the alkali and chlorine are kept separate by the use of a mercury cathode, which forms an amalgam with the alkali. The Castner process, in which there is a double electrolysis, is the most important of these processes. There are three compartments, in all of which mercury lies at the bottom. The two end compartments contain brine, and here the mercury is the cathode and unites with the sodium (in the electrolysis of common salt). The middle compartment contains caustic soda, and here the mercury forms the anode, the cathode being of iron. The mercury can pass from one compartment to another, and makes continuous metallic connection. The amalgam is made to pass from the end compartments toward the middle and back again by a rocking motion given to the electrolyzing bath. This process is used in a number of countries, notably in the United States and in Britain. The Electro-Chemical Company, at Niagara, has lately installed a large plant. About fifty baths are arranged in series, each one requiring about four volts.

Other processes involving the formation of amalgam are also patented. One is that of Arif. The mercury is allowed to flow in a stream into the vessel with the electrolyte, and is drawn away at the deepest part of the cell. In order that the mercury should not be attacked in the cell, the layer at the bottom of the cell is covered with chloroform or some heavy liquid of similar character. The stream of mercury as it flows in must, of course, be continuous, and is connected with the cathode. It would seem that this process would give an amalgam of very low concentration (containing very little of the alkali metal).

A. Koch likewise patents a process in which the mercury is rapidly removed from the electrolytic cell, and in this case also the amalgam never reaches a high concentration.

Stoermer made the observation on which he grounds the patent that an amalgam of very considerable concentration can exist in presence of the electrolyte, provided the amalgam forms a continuous surface under which lies a mercury containing very little metal. The patent consists in a stirrer working beneath the surface of the mercury in such a way as not to break the surface layer, which is a highly concentrated amalgam. The mercury, being kept stirred, takes a considerable time to attain any large concentration, while the surface layer becomes largely charged with the metal, such as sodium, separating at the cathode.

Stoermer also patents a washing apparatus for amalgam, by which the amalgam is thoroughly mixed with the liquid which dissolves out the metal united to the mercury in the amalgam.

A. Sinding-Larsen patents another process for washing out alkali amalgam. The amalgam flows in a spray from a centrifuge into the reacting liquid.

Blount, who is quoted by V. Hoelbling, in an article in the Zeitschrift für Chemische Industrie, compares the chemical and electrolytic processes for making soda. He says the electrolytic process requires two raw materials—common salt and water—and yields the products caustic soda and chlorine. It is more direct, there are no by-products, the labor is less expensive, but the apparatus is costly and the deterioration rapid.

The chemical processes give large yield with simple, though large, apparatus, which is relatively cheap and but seldom requires repairs. The waste products are in some cases troublesome. The Le Blanc process involves the manufacture of sulphuric acid and nitric acid, and the lime which is employed to convert the sodium carbonate into caustic produces the useless carbonate of lime. In the Le Blanc process it is calculated that for one ton of caustic soda and the by-products, 5 3-10 tons of coal are required, while the electrolytic process requires 3 2-10 to 4 2-10 tons.

A very recent issue of the Zeitschrift für Chemische Industrie describes a patent by Solvay & Co., of Brussels, of an electrolytic cell which is modeled after the ordinary gravity cells. The cathode, which is a layer of mercury, is covered by a saturated solution of alkaline chloride, kept saturated by being in connection with a reservoir containing the solid salt. The saturated solution dissolves little chlorine. A more dilute layer lies above the concentrated one; the anode is in the upper layer.

The quality of the caustic produced by the electrolytic methods has lately been improved. At first the alkali was very impure, besides being dilute and requiring the expenditure of considerable fuel for evaporation. But by the Hargreave process it is claimed that a soda ash is obtained of a purity 97.7 per cent., the impurity being sodium chloride, sulphate and sulphite, the last two being introduced by the gases used for carbonating. The carbonate of soda solution is so strong that it separates out in crystals. F. H. Thorp says that if the theoretical yield were obtained the chlorine evolved would make about 100 pounds of bleaching powder for each 40 pounds of caustic soda produced. But the latter, which is in much greater demand than bleaching powder, can be made more cheaply from ammonia soda; therefore it would seem that if electrolytic methods prove successful in the future their expansion would be limited to bleaching powder and chlorates, and the caustic be regarded as a by-product. So great advances have recently been made in the electrolytic processes that we are led to expect that even the caustic may be made cheaper in this way than by the ammonia soda process. Besides the electrolysis of solutions processes for the electrolysis of fused salts have been tried, and though these processes have not seemed so successful as the others, Vasstin, after very considerable experimenting, claimed to have succeeded in making a commercial process. A certain mixture of sodium and lead chloride is electrolyzed, molten lead being used as cathode. The anode consists of a vessel containing molten lead. Part of the lead is acted on by the chlorine, and forms more lead chloride, which dissolves in the bath. By regulating the current the formation of lead chloride can be increased or diminished.

## OPACITY OF PAPER.

**It May be Increased by the Interaction of Soluble Substances to Precipitate Insoluble Compound on the Fibres.**

Increased opacity to paper, according to an English experimenter, is obtained by the interaction of soluble substances to produce insoluble chemical compounds within and about the substance of the fibre. He finds by this method of depositing solid matter within and about the fibres that it is possible to obtain a greater quantity of paper from a given quantity of pulp, and that such paper is more opaque than without such treatment.

The following substances, among others, are suitable for the purpose indicated: The silicates, carbonates and sulphates of calcium, barium and lead. These bodies are in all cases produced by means of soluble salts; for example, in the case of calcium silicate he finds it convenient to use calcium chloride and silicate of soda.

One method of applying this invention is to introduce the soluble substances separately in proper proportions into the beating engine, time being given for one solution to thoroughly permeate the mass before the second solution is applied. It is found in practice that good results are obtained if about half an hour elapses between the addition of the first and second solutions.

Another method which is found in practice to be very economical is to partially dry the newly made paper and then to pass it through baths containing saturated solutions of the necessary soluble substances; this application of the process is found to be of value for rendering the paper opaque, and for the purpose of "loading" it. If desired the material may be treated with the solutions prior to the "beating" stage; for instance, it is in some cases preferred to add the solutions to the material just before bleaching it, as at this stage less water is present.

The proportions in which the soluble substances are applied are those proportions by weight by which they interact, and the amount added naturally depends upon the kind of paper under treatment and the degree of opacity or amount of "loading" required.

In manufacturing ordinary "bank" paper a great degree of opacity may be obtained by adding about 100 pounds of commercial sodium silicate to about 3 cwt. of pulp in the beating engine, about two hours before the pulp leaves the engine, and after this has thoroughly permeated the mass, adding sufficient calcium chloride—about 57 pounds—to interact with the sodium silicate. The other substances usually introduced into the beating engine may be added as under ordinary conditions. Before the pulp leaves the engine it should give a slightly acid reaction, in order that it may take the size well, and this reaction may be conveniently produced by adding sulphate of alumina. It is found that if the exact proportions of the soluble substances necessary for interaction be added, a few—say six—pounds of sulphate of alumina per 3 cwt. of pulp is sufficient. The proportions of all the reagents used will necessarily vary to some extent on account of the commercial impurities generally present. Good results have also been obtained by the interaction of lead acetate and sulphate of alumina, sulphate of lead being in this case formed.

For the successful working of this process it is important, points out the writer, that the size should be, as far as possible, free from greasy matter, and the paper should be allowed to remain for as long a time as possible in the size, especially if large quantities of the soluble substances have been used in its manufacture.

It is said that paper made according to this process, in addition to being more opaque, has, where no coloring substances are used, a greater degree of whiteness than paper made from similar quality pulp by any other process.

### Linoleum Printing Machine.

The Moore & White Company, Philadelphia, Pa., is distributing among its customers fine framed photographs, 18 by 30 inches, of its oil-cloth and linoleum printing machine, as arranged for ten colors. The stamp and supporting frames of this machine are actuated by sliding wedge cams, one extending on each side of the machine nearly the entire length thereof. The blank linoleum passes over a table underneath the gang of printing dies, which are all raised and lowered by a movement of the long cam frames noted above.

### Impermeable Paper.

The making paper impermeable is the subject of a patent taken out recently in France. The method is also applicable to tissues and, generally, all objects which it is desired to coat with a view to ornamentation or utility. It is composed as follows: Nitro-cellulose, 3 to 5 parts; acetone, alcohol, ether, or other dissolvent of nitro-cellulose, 100 parts; toluol, 20 parts; mono-nitronaphthaline, 5 to 10 parts; oil of resin, 5 parts. To diminish the combustibility of this product and render it uninflammable there is added to the solution about 10 per cent. of chloride of tin, or magnesia, or any chloride soluble in alcohol.

# MATHIESON ALKALI WORKS

WORKS AT

SALTVILLE, VA.

AND

NIAGARA FALLS, N. Y.

## "EAGLE-THISTLE" BRANDS

# BLEACHING POWDERS

HIGH TEST

Packed in Steel Drums, air tight, insuring full strength at point of consumption.

## SODA ASH

48% and 58%.

## CAUSTIC SODA

60%, 70%, 72%, 74%, 76%—also 78%.

Our 78% Caustic Soda is an article of greater purity than has ever before been produced in a commercial way, analyzing 99.70 Hydrate of Soda.

## BICARBONATE OF SODA

Packed in Kegs, Bbls. or Bags, also Cases.

# ARNOLD, HOFFMAN & CO.

SOLE AGENTS

| PROVIDENCE | NEW YORK | BOSTON | PHILADELPHIA |
|---|---|---|---|
| 55 Canal Street | 33 Pine Street | 70 Kilby Street | 117 Chestnut Street |

# MARKET REVIEW.

OFFICE OF THE PAPER TRADE JOURNAL,
Friday, June 2, 1899.

FINANCIAL.—The money market this week has been decidedly easy. Call money ranged from 2 to 3 per cent., most of the loans being made at 2½. Time money has remained steady at 3 per cent. on high grade collateral; 3½ on good mixed collateral and 4 per cent. on collateral that banks are in doubt about. Commercial paper is quoted at 3½ to 4 per cent. on bills receivable and prime single named; supply scant and demand active. The bid and asked quotations for trade securities at the close Thursday were as follows:

| | Bid. | Asked. |
|---|---|---|
| American Straw Board | 28½ | 30 |
| International Paper, com. | 40½ | 40¾ |
| International Paper, pref. | 78 | 79 |
| National Wall Paper Co. Debenture Stock | 68 | 80 |
| Standard Rope and Twine | 6¼ | 8 |
| Standard Rope and Twine, 6s | 85½ | 86½ |
| Standard Rope and Twine Income Bonds | 25 | — |
| Union Bag and Paper, com. | 24 | 24¼ |
| Union Bag and Paper, pref. | 73⅛ | 73⅜ |
| U. S. Envelope, pref. | 100½ | 102 |
| U. S. Envelope, 1st 6s | 111 | 112 |

THE PAPER MARKET.—Up to a few weeks ago the mills were busy, orders being plentiful, and the elements being propitious for smooth and uninterrupted running of those mills which depended upon water for their power. This condition was followed during the spring by a period of high water, which caused interruptions of a temporary nature in some cases and total stoppages of the machinery in others, and then for a while normal conditions again prevailed. Reports received during the past week from water power districts show that at the present time some mills are handicapped by an insufficiency of water supply, and that in those streams which were once overcharged with water caused by the spring freshets, low water, caused by warm weather and its excessive use by the mills in order to "catch up," prevailed during the week. Locally a fair business was doing, News and Manilla being the leaders and Book and Writings being active factors.

JUTE BUTTS.—There were 3,004 bs. Jute Butts imported at the port of New York this week. We quote: Jute Butts, paper makers' quality, 1.15c.

WOOD PULP.—The mills were busy, and considerable pulp was exported to Antwerp, London and Venice. We quote: Wood Pulp, $12@13 f. o. b. at the pulp mill.

WOOD FIBRE.—Business in domestic fibres continued active, the special demands being for unbleached sulphite. While there has been no advance in price, yet the market was firm at the quotations made below. We quote: Foreign Sulphite, bleached, 3.15@3.50c.; unbleached, 1.90@2.15c., both according to grade; Domestic Sulphite, bleached, No. 1 grade, 2.75@3c.; No. 2 grade, 2.50c.; unbleached, 1.75@2c.; selected quality, Mitscherlich process, 1.90@2.25c.; Foreign Soda, bleached, 2.50@2.75c.; unbleached, 1.87½@2c.; Domestic Soda, bleached, 2⅛@2¼c. There was no Chemical Fibre imported at New York this week.

FOREIGN RAGS AND PAPER STOCK.—The market was rather quiet, and the demand was rather for low grade linen stock. Imports were comparatively small. We quote: German Blue Cottons, 1.15@1.20c.; Dutch Blues, 1.20c.; Light Prints, 1@1¼c.; New Cuttings, 2⅛@2½c. There were 1,194 bales and 306 coils imported at New York this week, being 368 bs. rags, 370 bs. old papers, 456 bs. and 306 coils manillas. The amounts and ports of shipment were as follows: Antwerp, 120 bs. rags, 384 bs. manillas; Glasgow, 370 bs. old papers; Hamburg, 33 bs. rags, 55 bgs. and 68 coils manillas; Havre, 60 bs. rags, 117 bs. and 52 coils manillas; Hull, 50 bs. rags, 119 coils manillas; Leghorn, 105 bs. rags; Liverpool, 67 coils manillas.

DOMESTIC RAGS.—Some dealers, who have open contracts, were somewhat busy, but the market on the whole was rather quiet. We quote: Hard Back Carpet, ⅜@.40c.; Rag Muss, .45c.; Satinettes, straight, .90@1c.; Mixed, .50@.55c.; Common Dark Seconds, .75c.; Mixed Cottons, .70@.80c.; Thirds and Blues, 1¼@1⅜c.; Thirds and Blues (street), 7-10@8-10c.; New York No. 2 Rags, .009@.0095c.; House Soiled Whites, 1.75c.; Street Soiled Whites, 1.10@1.20c.; No. 1 Whites, 2⅛@2¾c.; New Black Cottons, .60@.75c.; New Common Dark Seconds, .60@.75c.; New Dark Cottons, 1@1¼c.; New Blue Cottons, 2@2½c.; New Light Seconds, 2½@3½c.; New White Shirt Cuttings, No. 2, 2@4c.; New White Shirt Cuttings, No. 1, 4½@5c.

BAGGING.—The market continued to improve, and prices, which were firm, showed a tendency to advance. There was no Gunny Bagging sold for less than .77½c., and Wool Tares commanded 1.10c. Manilla Rope was very scarce, and the price ruled from 2⅛@2¼c. We quote: Manilla Rope, 2⅛@2¼c.; Mixed Bagging, .77½c.; Wool Tares, 1.10c.; Burlaps, .95c.; New Burlap Cuttings, 1@1¼c. There were 456 bs. and 306 coils manillas imported at New York this week as follows: Antwerp, 384 bs.; Hamburg, 55 bs., 68 coils; Havre, 117 bs., 52 coils; Hull, 119 coils; Liverpool, 67 coils.

OLD PAPER.—Old papers were very scarce, and the demand was good, Soft White Shavings and white stock generally, Mixed Shavings and Common Shavings being in special demand. The price of No. 2 Manillas fell off, while the price of No. 1 Manillas, ordinary, advanced from .80c. to .85c., and the price of Folded News from .45c. to .50c. Large lots of the latter were sold at .50c. We quote: No. 1, Hard White Shavings, 1⅞@2¼c.; No. 1, Soft White do., strictly free from wood, 1.55@1.60c.; Soft White do., ordinary, 1.50c.; Ledgers, 1¼@1⅜c.; Ledgers and Writings, 1.05@1.10c.; Solid Printed Books, .85@.90c.; Mixed Shavings, No. 1, .75@.80c.; No. 2, .60@.65c.; Extra No. 1 Manillas, 1c.; No. 1 Manillas, ordinary, .70@.85c.; No. 2 manillas, .55@.60c.; Folded News, .50c.; Folded News (over issue), .50c.; Crumpled News, .35@.40c.; Mixed Papers, .27½@.30c.; Commons, .22½@.25c.; Straw Clippings, .35c.; Binders' do., .40@.45c. There were 370 bs. old papers imported this week from Glasgow.

STRAW.—Considerable straw was offered at about the same price as usual. We quote: Long Rye, .35@.40c.

ROSIN.—There was a lack of stock, and business ruled quiet. The price of the lower grades declined somewhat, but the price of pale grades was steady. We quote: Common Strained, $1.40; Good Strained, $1.40; E, $1.45@1.50; F, $1.55@1.60; G, $1.60@1.65; H, $1.75; I, $1.82½@1.85; K, $2; M, $2.10@2.15; N, $2.30@2.35; W G, $2.55@2.60; W W, $2.75@2.80.

CHEMICALS.—Alkali was in fair demand; also Caustic Soda, which showed a tendency to advance. Arrivals of Bleaching Powder were free. J. P. Brunner & Co., Liverpool, in their last circular to the trade, say in part: "In heavy chemicals there is a fair trade passing at steady prices. Brunner, Mond & Co. have announced a dividend of 30 per cent. on their ordinary stock for the twelve months ending March 31 last, in addition to which £111,000 is carried forward. The dividend is 5 per cent. and the amount carried forward about £30,000 in excess of the return for the previous twelve months, which is a marvelous result, considering the severe foreign competition and condition of the chemical trade generally. A disaster occurred at St. Helens on the 12th inst., owing to a fire at the Kurtz Works, causing an explosion of about 160 tons chlorate of potash, resulting in five deaths and a number of persons injured, while the town was partially wrecked. Considering the damage done to the surrounding property, it is surprising the fatalities were not more numerous. Soda Ash is unchanged, and business going at varying prices, according to market. We quote maximum range for tierces about as follows: Leblanc Ash, 48 per cent., £4 5s. to £4 10s. per ton; 58 per cent., £4 10s. to £4 15s. per ton, net cash. Ammonia Ash, 48 per cent., £4 to £4 5s. per ton; 58 per cent., £4 5s. to £4 10s. per ton, net cash. Bags, 5s. per ton under price for tierces. Soda Crystals find a ready sale at £2 17s. 6d. per ton, less 5 per cent. for barrels, although lower prices are taken for certain favored quarters. Bags, 7s. per ton under price for barrels. Caustic Soda in moderate request, and firm at £6 for 60 per cent., £7 for 70 per cent., £7 10s. for 74 per cent., and £7 15s. per ton for 76 per cent., net cash. Bleaching Powder is held for £4 17s. 6d. to £5 per ton net cash for hardwood, but outside makes are only offering to a limited extent. Chlorate of Potash is in better request, and a fair business reported to have been done, principally for the Continent, although some American orders have also been placed. Quotations are unchanged, at 3½d. to 3¾d. per pound for crystals and 3⅝d. to 3¾d. per pound for powdered, according to quality." Peter R. McQuie & Son, Liverpool, also say, under date of May 19: "Heavy chemicals generally have not experienced a very brisk demand during the past month, but there has been a fair average inquiry, with a slight improvement in one or two departments. The whole trade, however, has received a severe shock from the terrible explosion at St. Helens, and much sympathy is expressed for the families of the victims. The destruction of plant and stock has been enormous, especially of Chlorate of Potash and Vitriol, and production at these works will be stopped for a long time to come. The calamity has been followed by increased activity in Chlorate of Potash, large quantities having since been bought for shipment to various countries; and as it is reported that the import duty in Japan will be withdrawn after the middle of August, an extension of business in that direction is very probable. Chlorate of Soda has moved off freely, most of the leading makers being nearly sold out, and now asking higher prices. Bleaching Powder shows little change, while values of Ammonia, Alkali and Caustic Soda are much as last quoted. A feature of the month has been the declaration of a 30 per cent. dividend by Messrs. Brunner, Mond & Co., who further accentuate their prosperity by carrying forward to next account no less a sum than £111,000. We quote to-day: Bleaching Powder, £4 5s. to £4 10s. per ton, Softwood, £4 15s. to £5 Hardwood. Special quotations for small or lead-lined packages. Caustic Soda, 60 per cent., £6 per ton; 70 per cent., £7; 76/77 per cent., £7 15s.; 78 per cent., £7 17s. 6d. Soda Ash: Leblanc, 48 per cent., £4 10s. per ton; Leblanc, 58 per cent., £4 15s. per ton; Ammonia, 48 per cent., £4 per ton; Ammonia, 58 per cent., £4 5s. per ton, in casks." We quote: Bleaching Powder, English, $1.60@1.75; German, $1.60@1.75; Continental, $1.50@1.65; Alkali, 80@85c.; Caustic Soda, $1.60@1.70; Alum, lump, $1.65@1.75; ground, $1.75@1.85.

BRIMSTONE.—Small spot sales were made at $22, and shipments were quiet. We quote: Brimstone, crude, seconds, $20.75@21; crude, thirds, $19.25@19.50.

TERRA ALBA.—There was a quiet market. We quote: Terra Alba, English, 85c.@$1; American, No. 2, 50@60c.

CHINA CLAY.—The supply was scarce and the demand active, with prices firm, but unchanged. We quote: China Clay, finest foreign, $15@17; domestic, nominal, $8.50@10.

TALC.—No American talc was offered. We quote: Talc, French, 80c.@$1; American, nominal, 50@65c.

BARYTES.—There was a brisk demand and prices were firm. We quote: Barytes, first quality, domestic, $18@20; second quality, $14.50@17; foreign, $19@20.

TWINES.—We quote; Sisal Hay, 7¼c.; Sisal Lath Yarn, 9¾c.; Jute Rope, 3½@4½c.; Twines, Jute, 18, 10½c.; 24, 10½c.; 36, 10c.; Jute and Hemp, 18, 13@14c.; 24, 12½@13½c.; 36, 12@13c.; Hemp, 18, 16c.; 24, 5½c.; 36, 15c.; Marlines, Jute, 4½@7c.; 8, 7c.; 7, 6½c.; Jute and Hemp, 6, 9@11c.; 8, 8@10c.; American Hemp, 4¼, 11c.; 6, 11c.; 8, 10c.

COAL.—We quote: Anthracite, $3.25@3.75, at New York.

## Thin Wrought Iron Pipe in the Market.

A correspondent of the American Machinist has been having trouble with steam pipe and contractors, as evinced by the following, in which he states that recently in writing up a specification for some piping it called for a pipe of full standard thickness, and one of the parties bidding objected to this on the ground that merchantable pipe now on the market was 10 per cent. less than this, and an extra charge would have to be made if the standard pipe was put in. This was from a pipe fitter who knew the pipe would be thoroughly inspected, and that it would be the wiser course to have all these questions settled beforehand.

On looking up the matter this proved to be the case, and the question arises, do designers know this fact, and allow this cheaper pipe to pass, so that it has become a standard?

The constant tendency is towards higher pressures, and while there is not much deterioration in steam pipe, there is more or less in water pipe, and in all pipe exposed to high temperatures there must be considerable strain from expansion and a liability to break at couplings and fittings where the thread cuts nearly through the pipe. In view of this, is it wise to allow the standard to be reduced?

In conversation with a maker of pipe, this matter was brought up, and he claimed that the maker was helpless, as the pipe was ordered of a certain weight, and they had to make what was ordered; that it came about in this way: Contractors, in submitting bids, always tried to get lower than others, and when they were awarded the contract bought such material as would give them a profit on the job, and ordered stock accordingly.

Another thing, when a firm doing its own work got a new purchasing agent this agent thought he had to make a better record than his predecessor, and bought goods where he could get them cheapest, and among other things thin pipe. For a time this showed all right, but later the accounts of the repair department went up, but rarely was the blame put at the right place.

It seems that this subject is important enough, so that mechanical engineers should in all cases demand that pipe should be of full standard thickness.

It would appear from observation that this new standard was trying to be made by contracting pipers. It can eventually be of no value to them, as the consumer pays the bills, and the cheaper pipe cannot give the satisfaction that first-class pipe will.

It also seems that the maker's name on the pipe is not proof that it is standard, and the only way to know definitely is to cut off a foot, not threaded, and weigh it, and then steel pipe will overweigh.

Another thing that was once attempted on the writer was to go by the outside diameter of pipe, and 13 inches was supplied where 14 inches was called for, claiming that above 12 inches pipe was known from outside diameter. This did not work, but I have heard of two or three cases where this had been tried.

Paper stock importers generally in New York were notified this week by the customs authorities that all duty heretofore paid by them upon jute stocks, with the exception of mixed bagging, would be remitted, and that a duty would be levied upon mixed bagging only hereafter.

# FARREL FOUNDRY AND MACHINE CO.,

ANSONIA, CONN., U. S. A.,

THE LARGEST MANUFACTURERS OF

## Chilled Rolls

IN THE WORLD.

ALSO MANUFACTURERS OF GRINDING MACHINES FOR ALL KINDS AND SIZES OF ROLLS.

**CHILLED AND DRY SAND ROLLS**

FOR ALL PURPOSES.

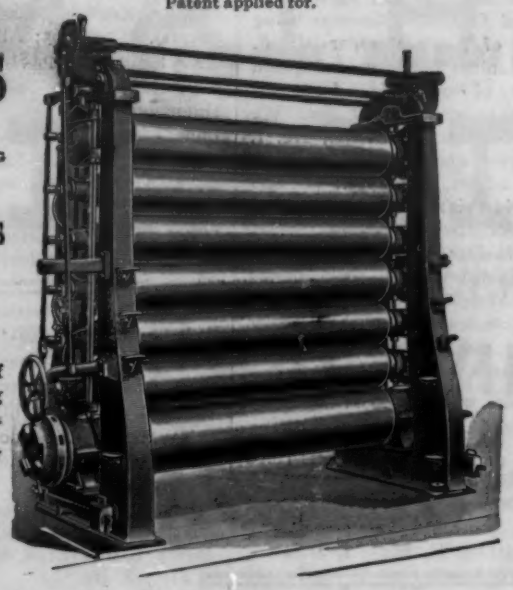
**COMPLETE CALENDERS.**

Patent lift device by means of which machine tender, standing on floor, can raise rolls in frames.

Housings so made that the rolls may be taken out endwise through frame.

*Old Rolls Reground at Short Notice.*

Patent applied for.



CHARLES S. BARTON, President and Treasurer. GEORGE B. WITTER, Secretary.

# RICE, BARTON & FALES MACHINE AND IRON CO.

(At Old Stand of Rice, Barton & Co.),

WORCESTER, MASS.,

— MANUFACTURERS OF —

## PAPER MACHINERY,

HILL'S PATENT SQUARE AND DIAGONAL CUTTERS,

Iron and Brass Castings, Chilled Iron and Paper Calender Rolls, Rag Engines Rag Cutters, Steam Pressure Regulators, Etc.

**HYDRAULIC PRESSES, FROM 5 TO 14 INCH PISTON.**

# CYPRESS TANKS AND VATS

OF EVERY DESCRIPTION.

Cypress is remarkable for its great durability. There is no other wood so well adapted for the manufacture of Tanks, Vats, Cisterns, Dye Tubs, &c. We handle Cypress from the stump and our stock is of the best. Our Tank Factory is complete. Let us know your wants.

THE A. T. STEARNS LUMBER CO., BOSTON.

# RICE Machinery Co.

ENGINEERS, FOUNDERS AND MACHINISTS,

INDEPENDENCE WOOD SPLIT PULLEYS, WITH PATENT BUSHING SYSTEM.

AMERICAN SYSTEM ROPE TRANSMISSION

SPLIT FRICTION CLUTCHES, SHAFTING, HANGERS, AND FULL LINE OF POWER TRANSMISSION, AND GRAIN HANDLING MACHINERY & APPLIANCES.

6446 MAIN

## 166-174 So. Clinton Street,

CHICAGO.

SEND FOR CATALOGUE.

Particularly adapted for PAPER MILL use. Light, strong, durable, readily placed in position, and economical in first cost. Made of steel or refined iron. Diameters 3 to 24 inches. Lengths up to 25 feet.

For water-mains, conveying of pulp, exhaust steam, exhaust steam heating, pump suction or discharge, ventilating, air or blower pipe. Catalog on application. Pipe, etc., gotten out to drawings or specifications.

*ABENDROTH & ROOT MFG. CO.,*

*99 JOHN ST., NEW YORK.*

BELOIT IRON WORKS BELOIT WIS

ALL TYPES

# PAPER MILL MACHINERY.

High Grade in Every Respect,
Embodying All Late Improvements.

**WET MACHINES, STUFF PUMPS, WATER PUMPS, FINISHING CUTTERS, BUNDLE CUTTERS, &c., &c., &c.**

## REWINDERS.

The only one in the market that will rewind into small rolls all on one shaft, up to any length.

**IMPROVED "LEADER" SCREEN.**

**BEST IN THE MARKET.** **Write for information.**

BELOIT IRON WORKS,

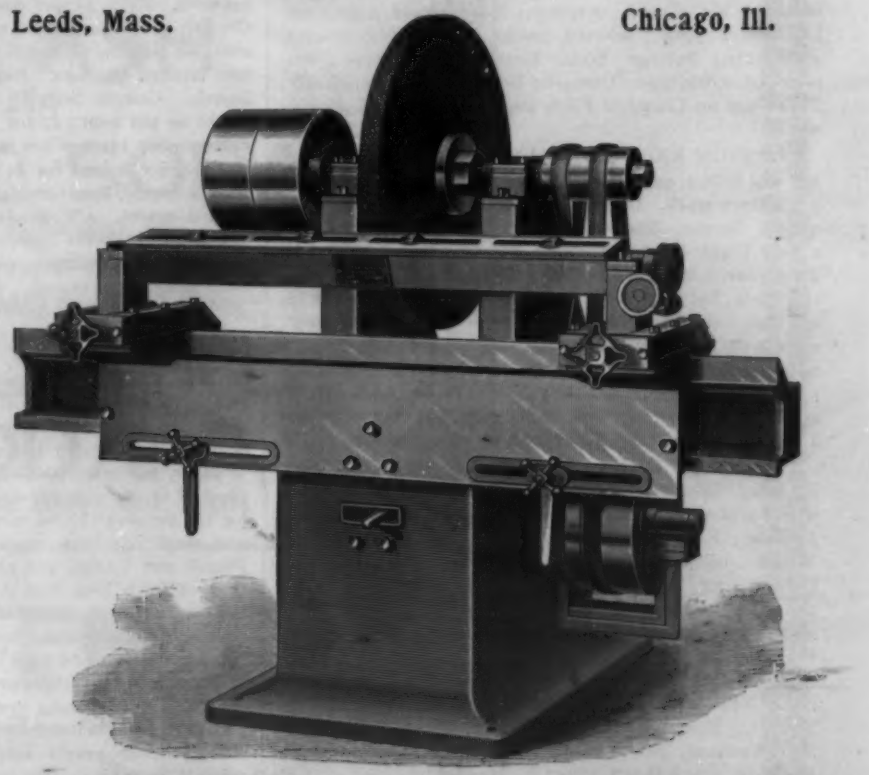
Established 1858. BELOIT, WIS., U. S. A.

*Agent for Scandinavia and Finland:*
C. S. CHRISTENSEN, Christiania.

*Agent for Great Britain:*
OTTO LECHLA, 28 Budge Row, London, E. C.

# The Northampton Emery Wheel Co.,

Leeds, Mass. Chicago, Ill.



## AUTOMATIC KNIFE GRINDERS

**FOR PAPER MILL AND PLANER KNIVES,**

Either with Cup Wheel or Plain Wheel, with or without Water Attachments.

**Makers of Emery Wheels for all Purposes.**

# IMPORTS AND EXPORTS.

## IMPORTS AT NEW YORK.

FOR THE WEEK ENDED MAY 26, 1899.

| | | |
|---|---|---|
| Alum | 3 | $53 |
| Aluminous Cake | .... | .... |
| Aniline Colors | 1,460 | 76,043 |
| Bleaching Powders | 831 | 7,917 |
| Books | 255 | 23,998 |
| Clay | .... | 1,985 |
| Engravings | 32 | 2,544 |
| Jute Butts, etc | 3,004 | 6,001 |
| Newspapers | 198 | 7,217 |
| Paper | 977 | 40,226 |
| Paper Hangings | .... | .... |
| Paper Stock | 3,714 | 22,471 |
| Printed Matter | 183 | 16,276 |
| Soda Ash | .... | .... |
| Soda Caustic | .... | .... |
| Soda Hypo | 102 | 576 |
| Soda Sal | .... | .... |
| Talc | 1,160 | 1,480 |
| Terra Alba | .... | .... |
| Twine | 1 | 16 |
| Ultramarine | 5 | 153 |
| Waste | 32 | 2,617 |
| Wood Pulp | 2,200 | 7,734 |
| Totals | 14,156 | $120,207 |
| Imports General Merchandise for the week ended May 26, 1899 | | $8,580,958 |

## IMPORTS OF PAPER STOCK AT NEW YORK.

FROM JANUARY 1 TO MAY 31, 1899.

| Whence Imported. | Rags. | Old Papers. | Chemical Fibre. | Manilla Stock. | |
|---|---|---|---|---|---|
| | Bs. | Bs. | Tons. | Bs. | Coils. |
| Antwerp | 7,743 | .... | .... | 8,111 | 165 |
| Bordeaux | 438 | .... | .... | .... | .... |
| Bremen | 998 | 210 | .... | 2,938 | 753 |
| Bristol | .... | .... | .... | .... | 1,932 |
| Buenos Ayres | 95 | .... | .... | .... | .... |
| Cent. America | 208 | .... | .... | .... | .... |
| Christiania | .... | .... | .... | .... | 27 |
| Copenhagen | 1,108 | .... | 483 | 1,303 | 541 |
| Dundee | 130 | 85 | .... | 4,371 | .... |
| Dunkirk | 362 | .... | .... | 449 | 406 |
| Genoa | 747 | .... | .... | 660 | .... |
| Glasgow | 166 | 1,019 | .... | .... | .... |
| Hamburg | 6,050 | 9 | .... | 9,662 | 362 |
| Havre | 807 | .... | 30 | 480 | 149 |
| Hiogo | 1,744 | .... | .... | .... | .... |
| Hull | 1,435 | 38 | 145 | 9,774 | 2,827 |
| Kobe | 5,025 | .... | .... | .... | .... |
| Leghorn | 2,356 | .... | .... | .... | .... |
| Leith | .... | .... | .... | 344 | 111 |
| Liverpool | 339 | 17 | .... | 1,697 | 1,717 |
| London | 998 | 958 | .... | 334 | 1,445 |
| Marseilles | 601 | .... | .... | 385 | 208 |
| Montevideo | 35 | .... | .... | .... | .... |
| Newcastle | 87 | 3 | .... | 82 | 1,455 |
| Rotterdam | 416 | .... | 178 | 742 | 267 |
| Stettin | 738 | .... | 180 | 788 | 200 |
| Yokohama | 1,180 | .... | .... | .... | .... |

**IMPORTS of Rags and other Paper Stock at the Port of New York for the month ended May 31, 1899, from the following named Ports, showing Quantities from each Port.**

| Whence Imported. | Rags | Old Papers. | Chemical Fibre. | Manilla Stock | |
|---|---|---|---|---|---|
| | Bales. | Bales. | Tons. | Bales. | Coils |
| Antwerp | 2,320 | .... | .... | 2, 85 | .... |
| Bordeaux | 165 | .... | .... | .... | .... |
| Bristol | .... | .... | .... | .... | 279 |
| Cent. America | 150 | .... | .... | .... | .... |
| Copenhagen | 869 | .... | 273 | 621 | 203 |
| Dundee | 44 | 25 | .... | 998 | .... |
| Glasgow | 84 | 603 | .... | .... | .... |
| Hamburg | 1,304 | .... | .... | 632 | 68 |
| Havre | 538 | .... | 30 | 123 | 134 |
| Hull | 516 | .... | .... | 360 | 430 |
| Kobe | 1,950 | .... | .... | .... | .... |
| Leghorn | 230 | .... | .... | .... | .... |
| Leghorn | 230 | .... | .... | .... | .... |
| Liverpool | 941 | 17 | .... | 732 | 160 |
| London | 930 | 534 | .... | 999 | 345 |
| Newcastle | .... | .... | .... | .... | 404 |
| Rotterdam | 73 | .... | 40 | 154 | 267 |
| Stettin | 494 | .... | 165 | 581 | .... |
| Totals | 8,487 | 1,179 | 519 | 6,691 | 2,350 |

**Special List of Imports of Paper Stock at the Port of New York for the month ended May 31, 1899.**

| Importers. | Rags. | Old Papers. | Chemical Fibre. | Manilla Stock. | |
|---|---|---|---|---|---|
| | Bs. | Bs. | Tons. | Bs. | Coils. |
| Avis, W. A., & Co | .... | 17 | .... | .... | .... |
| Bertuch, F., & Co | .... | .... | 295 | .... | .... |
| Butterick Pub. Co | .... | 30 | .... | .... | .... |
| Castle & Gotthell | 813 | 119 | 25 | 295 | .... |
| Devoy Bros | .... | .... | .... | .... | 190 |
| Garcher, A. K | 133 | .... | .... | .... | .... |
| Goldman, Sigmund | .... | .... | 130 | .... | .... |
| Hampton, J. W., Jr., & Co | .... | .... | .... | 175 | .... |
| Harley, Charles | 190 | .... | .... | .... | .... |
| Helwig, Rudolph | .... | .... | 49 | .... | .... |
| Hollender, A. H., & Co | 135 | .... | .... | .... | .... |
| Jessup & Moore Paper Co | 302 | .... | .... | 343 | .... |
| Katzenstein, A | 1,291 | .... | .... | .... | .... |
| Lewy Bros. Co | 363 | .... | .... | 297 | .... |
| Libmann, J., & Co | 148 | .... | .... | .... | .... |
| Lyon, J. H., & Co | .... | 233 | .... | .... | .... |
| Mason, J. W., & Co | .... | .... | .... | .... | 1,230 |
| Middleton & Smith | 1,970 | .... | .... | .... | .... |
| Perkins, Goodwin & Co | .... | .... | .. | 139 | 67 |
| Pirnie, James | 221 | 63 | .... | 3,976 | 52 |
| Reynolds-Boyle Co | .... | 75 | .. | .... | .... |
| Salomon Bros. & Co | 948 | .... | .... | 619 | .... |
| Salomon, Felix, & Co | 2,176 | 21 | .... | 1,197 | 320 |
| Small, J. B., & Co | .... | .... | .... | 289 | .... |
| Smith, Augustine J., & Co | 84 | .... | .... | .... | .... |
| Stratford, George | .... | .... | .... | .... | 82 |
| Train, Smith Company | 253 | 629 | .... | .... | 900 |
| Totals | 8,487 | 1,179 | 519 | 6,691 | 2,350 |

## NEW YORK IMPORTS.

FROM MAY 24 TO MAY 31, 1899.

### Paper Stock.

James Pirnie, British Queen, Antwerp, 384 bs. bagging.
A. Katzenstein, Noordland, Antwerp, 120 bs. rags.
Augustine S. Smith & Co., Mongolian, Glasgow, 370 bs. old papers.
Felix Salomon & Co., Phœnicia, Hamburg, 68 coils rope, 55 bs. manillas, 27 bs. rags.
A. Katzenstein, by same, 6 bs. rags.
James Pirnie, Wooloomooloo, Havre, 117 bs. bagging, 52 coils rope.
A. Katzenstein, by same, 60 bs. rags.
Felix Salomon & Co., Hindoo, Hull, 119 coils old rope.
Castle & Gottheil, by same, 50 bs. rags.
Jessup & Moore Paper Company, Victoria, Leghorn, 105 bs. rags.
Perkins, Goodwin & Co., Nomadic, Liverpool, 67 coils old rope.

### Paper.

A. C. Bulkley, Majestic, Liverpool, 2 cs. hanging.
G. Amsinck & Co., Phœnicia, Hamburg, 26 bs.
G. W. Sheldon & Co., by same, 3 cs. hanging.
Marks & Meyer, Kensington, Antwerp, 2 cs.
Dingelstedt & Co., by same, 37 cs.
Kupfer Brothers, by same, 10 cs.
J. W. Hampton, Jr., & Co., by same, 20 cs.
Eugene Dietzgen & Co., by same, 8 cs.
Scovill & Adams Company, by same, 8 cs.
G. Gennert, by same, 10 cs.
A. S. Aloe & Co., by same, 3 cs.
American Tobacco Company, Wooloomooloo, Havre, 50 cs.
J. C. Drucklieb & Co., by same, 60 cs.
E. T. Molloy, by same, 7 bs.
Speigelberg & Co., by same, 57 cs.
W. Wicke & Co., Trave, Bremen, 1 cs.
John Hunter, Hindoo, Hull, 11 cs.
E. G. Soltmann, British Queen, Antwerp, 4 cs.
Dingelstedt & Co., by same, 57 cs.
J. W. Hampton, Jr., & Co., Graf Waldersee, 1 cs.
Frank Muller, by same, 2 cs.
G. W. Sheldon & Co., by same, 10 cs.
Gluckman & Co., by same, 1 cs.
Adolph Kraut, by same, 14 cs.
C. B. Richards & Co., by same, 1 cs.
Baldwin Brothers & Co., by same, 1 cs.
Hermann Lips, City of Rome, Glasgow, 14 cs.
M. Speigel, La Gascogne, Havre, 1 cs.
Gluckman & Son, by same, 1 cs.
F. Beck & Co., by same, 4 cs.
Warren, Fuller & Co., by same, 2 cs.
J. W. Hampton, Jr., & Co., by same, 3 cs.
Miller, Sloan & Wright, Spaarndam, Rotterdam, 2 cs.
J. Ter Kuyle, by same, 1 cs.
Hug & Boskowitz, Menomenee, London, 4 cs.
Wm. Wicke & Co., Kaiser Wilhelm der Grosse, Bremen, 1 cs.
Knauth, Nachod & Kuhne, Noordland, Antwerp, 1 cs.
R. F. Downing & Co., by same, 12 cs.
L. C. Wagner & Co., by same, 4 cs.
Dingelstedt & Co., by same, 20 cs.
Eastman Kodak Company, by same, 38 cs.
J. W. Hampton, Jr., & Co., by same, 1 cs.

### Bleaching Powder.

Fuerst Brothers & Co., Westernland, Antwerp 293 cks.
A. Klipstein & Co., by same, 38 cks.
I. L. & D. S. Riker, Cevic, Liverpool, 351 cks.
J. L. & D. S. Riker, Salerno, Newcastle, 149 cks.

### China Clay.

George W. Coulston & Co., Cymric, Liverpool, 80 cks.
F. A. Reichard, by same, 120 cks.
George Hamilton, by same, 8 cks.
L. A. Salomon & Co., by same, 95 cks.
Moore & Munger, by same, 10 cks.

### Soda Ash.

Wing & Evans, Cymric, Liverpool, 50 cks.

## BOSTON IMPORTS.

FROM MAY 24 TO MAY 31, 1899, INCLUSIVE.

### Paper, Etc.

Baldwin Brothers, New England, Liverpool, 2 trusses printed paper.
W. W. Edgar, by same, 7 cs. books.
W. H. Guild, Pavonia, Liverpool, 6 bs. periodicals.
Dennison Manufacturing Company, by same, 6 cs. tissue paper.
Little, Brown & Co., by same, 1 cs. books.
Public Library, by same, 1 cs. books.
F. H. Koehler, by same, 1 cs. books.
E. A. Snow, by same, 6 cs. books.
Pitt & Scott, by same, 1 cs. books
American Express Company, Armenian, Liverpool, 1 bx. books.
T. H. Castor, by same, 1 cs. books.
Richard Briggs & Co., by same, 1 cs. books.
Stoddard, Haserich, Richards & Co., by same, 1 cs. hangings.

### Paper Stock.

Train, Smith Company, New England, Liverpool, 340 bs. rags, 200 bs. manillas, 215 bs. waste paper.
E. Butterworth & Co., Sachem, Liverpool, 48 bs. rags, 50 bs. manillas, 69 bs. waste paper.
Horace Dutton & Co., by same, 344 coils manillas.
E. P. True, by same, 20 bs. rags, 82 bs. waste paper.
Salomon Brothers, Columbian, London, 113 bs. rags.
Horace Dutton & Co., by same, 368 coils manillas.
Crocker, Burbank & Co., by same, 126 bs. waste paper.
E. P. True, by same, 67 bs. waste paper.
Train, Smith Company, Norwegian, Glasgow, 55 bs. paper stock.
Horace Dutton & Co., by same, 88 coils, 118 bs manillas.
E. P. True, by same, 38 coils, 26 bs. manillas.
Train, Smith Company, Sachem, Liverpool, 95 bs. manillas.
Horace Dutton & Co., by same, 86 coils manillas

### Bleaching Powder.

I. L. & D. S. Riker, Sachem, Liverpool, 364 cks.
Montreal Cotton Company, Armenian, Liverpool, 16 cks.

### China Clay.

Moore & Munger, Pavonia, Liverpool, 150 cks.
E. A. Snow, by same, 4 cks.
John Richardson, by same, 400 cks.
P. S. Bush, Sachem, Liverpool, 20 cks.
John Knight Company, by same, 260 cks.


A. G. ELLIOT & Co. ....PAPER.
.... PHILADELPHIA, PA.
Correspondence solicited with manufacturers desiring Philadelphia outlet.

WATERPROOF LINING PAPER.
Unsurpassed for lining cases or wrapping goods for export where shipments are subject to moisture in transit.
HOLTEN & COLLINS,
509 Minor Street, - - - - - - - Philadelphia, Pa.

TELEPHONE CALL, 1515 CORTLANDT.

ESTIMATES FURNISHED AND CONTRACTS EXECUTED.
ROBERT A. KEASBEY,
K & M. MAGNESIA & MAGNABESTOS SECTIONAL COVERINGS,
Buffalo Office 13 TERRACE. TELEPHONE CALL

HEADQUARTERS FOR HAIR FELT, MINERAL WOOL, ASBESTOS PAPERS, BRINE PIPE COVERINGS, ETC.
63 WARREN ST. New York City.

A. D. LITTLE, GRIFFIN & LITTLE, PAPER MILL CHEMIST,
7 Exchange Place, Boston. Long Distance Telephone 2312 Boston.
EXPERT IN THE SULPHITE PROCESS AND ALL CHEMICAL MATTERS PERTAINING TO THE MANUFACTURE OF PULP AND PAPER.

WE CLAIM THE FOLLOWING MERITS FOR
JENKINS BROS.' VALVES:
1. Manufactured of the best Steam Metal.
2. No regrinding, therefore not constantly wearing out the Seat of the Valves.
3. Contain JENKINS DISC, which is suitable for all Pressures of Steam, Oil and Acids.
4. The Easiest Repaired, and all parts Interchangeable.
5. Every Valve Tested before leaving the factory.
6. ALL GENUINE stamped with Trade Mark.
JENKINS BROTHERS,
New York, Philadelphia, Boston, Chicago

FOSTER & BROWN, SACCARAPPA, MAINE,
MACHINISTS AND IRON FOUNDERS.
SPECIALTIES:
Improved Paper-Coating Machines; Hanging Machines and Power Reels for Coated Paper; the Merrill-Foster Noiseless Pulp Screens; Paper Slitting and Trimming Machines; Hardened and Ground Slitters; Automatic Elevators.
BUILT UNDER OUR OWN SUPERVISION.

MICHIGAN SULPHITE FIBRE CO.
Manufacturers of ... ...
THE HIGHEST GRADE SULPHITE FIBRE
(MITSCHERLICH'S PROCESS)
MILLS at Port Huron, Mich.
General Offices,
1416-18 Majestic Bldg.,
DETROIT, MICH.
Eastern Agents,
Frederick Bertuch & Co. and H. O. Bateman,
308-311 Temple Court Bldg.,
NEW YORK.

132 Nassau Street (Vanderbilt Bldg.), New York.
A. KATZENSTEIN.
Sole Agent for the following Rag Packers:
BORG & LEVY, . Beauvais (France).
H. MEYER & CO., . Luebeck . (North Germany).
MARX MAIER, . Mannheim (South Germany).
Packers of New and Old Rags, Bagging, Rope and Wastes.
STOCK GRADED TO SUIT MANUFACTURERS.

**Sizing.**

Train, Smith Company, New England, Liverpool, 15 bgs.
T. Groom & Co., Pavonia, Liverpool, 85 bgs.
E. Butterworth & Co., Sachem, Liverpool, 169 bgs.
Train, Smith Company, Armenian, Liverpool, 183 bgs.

**Soda Ash.**

Warren & Co., Sachem, Liverpool, 400 kgs., 36 cks.
Linder & Meyer, Armenian, Liverpool, 26 cks.

**Chlorate Soda.**

J. L. & D. S. Riker, Sachem, Liverpool, 100 bgs.

**Crude Sulphur.**

Linder & Meyer, Armenian, Liverpool, 834 bgs.

## PHILADELPHIA IMPORTS.

FOR THE WEEK ENDED MAY 27, 1899.

**Barytes.**

Gabriel & Schall, Arcadia, Hamburg, 25 cks.

**Bleaching Powder.**

Order, Carthagenian, Liverpool, 81 cks.
J. L. & D. S. Riker, by same, 94 cks.
O. S. Janney & Co., Arcadia, Hamburg, 125 ds.
Order, Rhynland, Liverpool, 222 cks.

**Books.**

J. B. Lippincott Company, Rhynland, Liverpool, 21 cs.

**Caustic Soda.**

Edward Hill's Sons & Co., Rhynland, Liverpool, 125 ds.
Edward Hill's Sons & Co., Minnesota, London, 250 ds.

**China Clay.**

Moore & Munger, Carthagenian, Liverpool, 209 bgs.
J. B. Moore & Co., by same, 550 bgs.

**Gunnies.**

The Atlantic Transport Company, Mackinaw, London, 75 bs.
Brown Brothers & Co., Rhynland, Liverpool, 75 bs.
Order, Minnesota, London, 26 cs.

**Paper.**

Brown Brothers & Co., Rhynland, Liverpool, 26 cs.

**Pasteboard Goods.**

O. G. Hempstead & Co., Arcadia, Hamburg, 11 cs.

**Rags.**

Order, Mackinaw, London, 60 bs.
Jessup & Moore Paper Company, Arcadia, Hamburg (also old rope), 130 bs.

## EXPORTS FROM NEW YORK.

FROM MAY 23 TO MAY 30, 1899.

BOOKS, to Argentine Republic, 2 cs.; Bremen, 6 cs.; British Guiana, 1 cs.; British Australasia, 54 cs.; Brazil, 13 cs.; Cork, 2 cs.; Chili, 12 cs.; Cuba, 13 cs.; Central America, 6 cs.; Glasgow, 2 cs.; Hamburg, 1 cs.; Havre, 2 cs.; Liverpool, 6 pkgs.; London, 27 cs.; Leipsic, 2 cs.; Newfoundland, 4 cs.; Nova Scotia, 3 cs.; Porto Rico, 7 cs.; Venezuela, 3 cs.; British West Indies, 4 cs. Totals—6 pkgs., $400; 164 cs., $8,974.

CARDS, cases, to London, 13; Nova Scotia, 1. Totals—14 cs., $1,317.

LABELS, cases, to Cuba, 1; Dutch West Indies, 1; Liverpool, 2. Totals—4 cs., $593.

MUSIC PAPER, box, to Madrid, 1, $111.

NEWSPAPERS, packages, to Cuba, 93, $151.

PAPER, to Antwerp, 326 pkgs.; Bremen, 10 pkgs.; British Guiana, 550 pkgs.; British West Indies, 363 pkgs.; British Australasia, 1,084 pkgs., 2 cts.; Boston (England), 41 pkgs.; Bern, 3 cs.; Bolton, 3 cs.; Brazil, 5 pkgs.; Chili, 72 pkgs.; Cuba, 1,513 pkgs.; Central America, 101 pkgs.; Christiania, 10 cs.; Canary Islands, 37 pkgs.; Dutch West Indies, 2 pkgs.; Glasgow, 57 pkgs.; Hamburg, 1 cs.; Havre, 34 cs.; Hull, 285 pkgs.; Liverpool, 376 pkgs.; London, 219 pkgs.; Mexico, 31 pkgs.; Newfoundland, 4 cs., 50 pkgs.; Porto Rico, 1,688 pkgs., 20 cts.; San Domingo, 106 pkgs.; United States of Colombia, 3 cs.; Uruguay, 12 pkgs.; Venezuela, 23 pkgs. Totals—38 cs., $1,340; 22 cts., $194; 7,860 pkgs., $54,703.

PAPER BAGS, to British Australasia, 1,254 pkgs.; Cuba, 38 bs., 35 bdls.; Newfoundland, 6 pkgs.; Peru, 1 pkg.; Porto Rico, 56 bs. Totals—17 cs.; $432; 35 bdls., $44; 1,264 pkgs., $3,593; 94 bs., $448.

PAPER BOXES, cases, to Glasgow, 34, $390.

PAPER CAPS, case, to Peru, $6.

PAPER GOODS, cases, to Mexico, 3, $65.

PAPER PATTERNS, cases, to Argentine Republic, 7; London, 2. Totals—9 cs., $527.

PERIODICALS, to British West Indies, 1 bl.; Newfoundland, 4 cs. Totals—1 bl., $10; 4 cs., $41.

PHOTOGRAPHS, to Bremen, 3 cs.; Berlin, 1 cs.; Southampton, 1 pkg.; Venezuela, 1 pkg.; Vienna, 1 cs. Totals—5 cs., $68; 2 pkgs., $23.

PICTURES, cases, to British West Indies, 1; Cork, 1; Cuba, 1; Hamburg, 4; Havre, 4; Liverpool, 3; London, 1; Southampton, 2. Totals—17 cs., $2,264.

PLAYING CARDS, cases, to British Australasia, 14, $830.

PRINTED MATTER, to Argentine Republic, 2 cs.; Bremen, 2 cs.; British Africa, 3 pkgs.; Brussels, 1 cs.; British Australasia, 6 cs.; British East Indies, 2 cs.; Cuba, 5 cs.; Genoa, 1 cs.; Hamburg, 21 pkgs.; Liverpool, 28 pkgs.; London, 58 pkgs.; Southampton, 38 pkgs.; San Domingo, 2 cs.; United States of Colombia, 1 cs.; British West Indies, 4 cs.; Venezuela, 3 cs. Totals—29 cs., $1,485; 126 pkgs., $6,1488.

STATIONERY, to Argentine Republic, 10 pkgs.; Bremen, 8 cs.; British Guiana, 4 cs.; British West Indies, 7 pkgs.; Berlin, 7 cs.; Brazil, 1 cs.; Chili, 3 cs.; Cuba, 8 cs.; Central America, 2 pkgs.; Dutch Guiana, 2 pkgs.; Hamburg, 4 cs.; Havre, 1 cs.; Liverpool, 5 cs.; London, 90 pkgs.; Mexico, 8 cs.; Newfoundland, 7 cs.; Nova Scotia, 1 cs.; Peru, 3 cs.; Porto Rico, 15 cs.; Southampton, 7 cs.; San Domingo, 11 pkgs.; United States of Colombia, 12 pkgs.; Uruguay, 20 cs.; Venezuela, 5 pkgs. Totals—156 cs., $9,808; 139 pkgs., $9,762.

TAGS, to British Australasia, 8 cs.; Mexico, 2 cs.; Newfoundland, 6 pkgs. Totals—10 cs., $99; 6 pkgs., $338.

TWINE, to Argentine Republic, 19 bs.; British Guiana, 3 bs.; British Australasia, 2 bs.; Cuba, 1 pkg.; Central America, 2 bs.; Ecuador, 12 bs.; Hamburg, 270 bgs.; Hull, 314 bdls.; Porto Rico, 1 bl.; United States of Colombia, 15 bs., 1 cs.; Uruguay, 3 bs.; Venezuela, 3 bs.; British West Indies, 7 bs.; San Domingo, 1 bl. Totals—1 cs., $23; 270 bags, $1,147; 314 bdls., $1,500; 1 pkg., $14; 68 bs., $1,155.

WALL PAPER, to Cuba, 1 cs.; Mexico, 20 bxs.; Porto Rico, 3 cs. Totals—4 cs., $120; 20 bxs., $630.

CAUSTIC SODA, drum, to United States of Colombia, 1, $25.

CLAY, bags, to Antwerp, 644; London, 480. Totals—1,124 bgs., $875.

COTTON WASTE, bales, to British West Indies, 3; Cuba, 3; Christiania, 33; Hamburg, 75; Porto Rico, 8; San Domingo, 2. Totals—124 bs., $2,092.

PAPER FINISH, barrels, to London, 5, $60.

RAGS, bales, to Hamburg, 162, $894.

ROSIN, to Bremen, 1 cs.; British Guiana, 3 bbls.; British West Indies, 20 bbls.; British Australasia, 17 bbls.; Chili, 15 bbls.; Canary Islands, 50 bbls.; Glasgow, 600 bbls.; Mexico, 250 bbls.; Nova Scotia, 20 bbls.; Porto Rico, 2 bbls.; San Domingo, 20 bbls.; United States of Colombia, 7 bbls.; Uruguay, 650 bbls.; Venezuela, 13 bbls. Totals—1 cs., $25; 1,667 bbls., $7,370.

SANDPAPER, to British Australasia, 5 pkgs.; Chili, 12 pkgs.; Cuba, 3 bs.; Havre, 28 bdls.; London, 42 bdls.; Newfoundland, 4 bdls.; Peru, 13 pkgs.; Porto Rico, 6 pkgs.; Uruguay, 2 cs. Totals—2 cs., $45; 3 bs., $15; 36 pkgs., $459; 74 bdls., $921.

TALC, to British West Indies, 20 bgs.; Cuba, 8 bbls. Totals—20 bgs., $32; 8 bbls., $126.

ULTRAMARINE, casks, to Nova Scotia, 2, $70.

WASTE, bales, to Argentine Republic, 9; Chili, 10. Totals—19 bs., $143.

WOOD PULP, to Antwerp, 764 bgs.; London, 156 rls.; Venice, 264 bdls. Totals—156 rls., $549; 764 bgs., $1,890; 264 bdls., $700.

Total exports for the week, $5,971,599.

## Mortgages, Etc.

[In the appended list R. signifies a renewal of a pre-existing mortgage; B. S., bill of sale; T. D., trust deed; T., trust mortgage; F., foreclosure; Real, a mortgage on real estate; C., conveyance, realty; Pr., printer; P., publisher; W. P., wall paper; B. and S., bookseller and stationer; S., stationer; L., lithographer; N., news.]

EASTERN STATES.

| *Mortgagor.* | *Amount.* |
|---|---|
| John Kummer (L.), Boston, Mass..... | $1,498 |

MIDDLE STATES.

| | |
|---|---|
| R. Rogow & Co. (W. P.), Newark, N. J... | 300 |

SOUTHERN STATES.

| | |
|---|---|
| Arthur F. Curran (Pr.), Dover, Ky. (also Real) ..... ..... | 625 |

WESTERN STATES.

| | |
|---|---|
| Henry Kuchel (P.), Anaheim, Cal..... | 1,250 |
| F. E. A. Kimball (N.), San Diego, Cal. (B. S.) ..... | 1,100 |
| Charles H. Gard (Pr.), Chicago, Ill..... | 400 |
| William S. and Eliza Park (P.), Gardner, Ill.... ..... ..... | 250 |
| Adolph Summerlin (Pr. and P.), Mattoon, Ill.. ..... ..... | 1,200 |
| Myron Jordan (P.), Moline, Ill. (Real)..... | 1,500 |
| Myron Jordan (P.), Moline, Ill..... | 700 |
| C. W. Richardson (P.), Graettinger, Ia.... | 193 |
| A. I. Baker (P.), Newton, Ia..... | 325 |
| Furman Tuttle (P.), Webster City, Ia. (Real) ..... ..... | 2,500 |
| Abe Steinberger (P.), Girard, Kan..... | 350 |
| Malta Bend Democrat Printing Company, Malta Bend, Mo..... | 135 |
| Dixon Brothers (Prs.), Springfield, Mo.... | 500 |
| Ephraim R. Holsinger (Pr.), St. Louis, Mo. | 150 |
| Lewis G. Blair (Pr.), Cincinnati, Ohio..... | 184 |
| Dutcher, Bread & Storgaard (P.), Brookings, S. Dak., Mr. Dutcher (Real)..... | 850 |

LIENS DISCHARGED.

| | |
|---|---|
| J. R. Derry (et al., P.), Girard, Kan..... | 200 |
| Everett Press Company, Boston, Mass.... | 6,000 |
| C. H. Goddard (P.), Dayton, Wash..... | — |

JUDGMENTS.

| | |
|---|---|
| H. P. Oggel (P.), Orange City, Ia..... | — |
| Kempson Publishing Company, Perth Amboy, N. J..... | 2,091 |

The Heller & Merz Company, manufacturer of ultra-marine blues and aniline colors, has purchased about six acres of land adjoining its present plant at Newark, N. J., and has placed orders for new boilers and mill, preparatory to materially enlarging its facilities. Improved conditions of business have created additional demands for the goods manufactured by the company. The company requests paper manufacturers to write for samples and terms.


**SQUARE PAPER BAG MACHINES,**
**PAPER BAG MACHINE DRYERS,**
**DUPLEX PAPER CARTRIDGE MACHINES.**

*DIAMOND PAPER BAG CO.,*
411 East Front St.,
WILMINGTON, DEL.

**BENJAMIN L. LEHMAN,**
Machinery Exhibition Department,
Bourse Building, PHILADELPHIA,

Invites Correspondence for both the Sale and Purchase of all kinds of Paper Cutting Machinery.

Guillotine or Ream and Rotary Card Cutters a Specialty.

**FOR SALE CHEAP.** One 40-inch Koegel & Sons Slitting Machine, with ten pairs of improved ball-bearing slitting knives. Has not been used three months.

**DIXON'S PURE FLAKE GRAPHITE**

**Has solved the problem of successful lubrication which confronts every employer of high-speed machinery, and repeated tests have shown that it is also unequalled for the purpose of lessening friction.**

A small quantity added to any oil or grease largely increases its lubricating value and makes the finest cooling mixture. Pamphlet and sample sent free.

**JOS. DIXON CRUCIBLE CO., JERSEY CITY, N.J.**

**ROLLS OF ALL KINDS**

CHILLED OR SOFT IRON, COPPER, BRASS, RUBBER, PAPER OR FIBRE

ground to perfect accuracy by the "POOLE" process.

We have for many years made a specialty of

**ROLL GRINDING,**

and with abundant facilities we are prepared to do this work promptly.

NEW CHILLED ROLLS of unexcelled hardness and finish furnished.

**THE J. MORTON POOLE CO., Wilmington, Del.**

**RIVERSIDE PAPER CO.,** HOLYOKE, MASS. — "MAGNA CHARTA" BOND, "PURE LINEN STOCK" LINENS (WHITE WOVE AND CREAM LAID), "DUNDEE RECORD" LEDGERS.

**FRANKLIN PAPER CO.,** HOLYOKE, MASS. — MANUFACTURERS OF WHITE BRISTOLS, WHITE BLANKS, DUPLEX AND SILK WRAPPING PAPER.

**These "SYRACUSE" ACID PROOF DIGESTER LININGS** are used by the leading manufacturers of Sulphite Fibre in the United States and Canada. *We make Bricks any shape or size.* Foreign orders solicited.

**NEW YORK BRICK AND PAVING CO.,**
SYRACUSE, N. Y., U. S. A.,
SOLE MANUFACTURERS.

**17 YEARS OF CONTINUOUS SERVICE**

**Have failed to impair the working power of LEVIATHAN BELTING. We have the records of the first Leviathan Belts manufactured. They were made and placed in use 17 years ago, and are still running and in first-class condition.**

In all Paper and Pulp Mills and Manufactories where the effect of moisture, heat or cold, or weather conditions have to be considered, Leviathan Belting is superior to all others, because

**It is made of a composition that is unaffected by heat, cold or moisture.**

MAIN BELTING COMPANY, Sole Manufacturers,
1227-1242 Carpenter Street, Philadelphia.
55-57 Market Street, Chicago. 120 Pearl Street, Boston.

There are others but none so good as **The Black & Clawson Co. Paper Machines.**

Latest types of every kind, embracing most modern improvements and attachments. Investigate and you will be convinced.

We also manufacture a general line of high-grade machinery for Paper and Pulp Mills. Attention given to building machines for special uses and purposes.

When In Need of Anything Write to

**THE BLACK & CLAWSON CO.,** Hamilton, Ohio,

For Prices and Particulars.

## Wants and For Sale.

Minimum rate for advertisements of this class one dollar each insertion. Over twenty-five words four cents a word each insertion.

Cash should accompany order.

Answers can come in our care and will be promptly forwarded without extra charge.

SUPERINTENDENT WANTED IN A SULphite mill; must be competent. Apply, stating experience, age, references and salary expected, to H. F. C., care Paper Trade Journal.

PRACTICAL SUPERINTENDENT WANTS position; book, news, manilla or express papers; sixteen years' experience; capable to take full charge; also small interest. Address PRACTICAL, care Journal.

WANTED—BACKTENDERS FOR FOURdrinier machines. Address BACKTENDER, P. O. Box 2032, New York.

COMPETENT BUSINESS MAN WISHES position as manager, city agent, office man or salesman; salary, or expenses and commission. Address CAREFUL, care Journal.

EXPERIENCED CYLINDER MACHINE tender wants position; best of references. Address ALL RIGHT, care Paper Trade Journal.

WANTED.

**Old Brass Wire Cloth, Scrap Brass, Old Paper Mill Felts.** Will be pleased to quote prices. Write to

THEODORE HOFELLER & CO.,
98-100-102 Terrace, Buffalo, N. Y

FOR SALE OR RENT,

**PAPER MILL,**

BRIDGEPORT, PA.

Near Philadelphia market. Two railroads. Cheap freight. Has been running Bag Manillas.
Address H. H. PIGOTT,
830 Builitt Building, Phila.,
or ROBERT P. DAGER, Bridgeport, Pa.

**PAPER MILL FOR SALE**

*First-class water-power the year around.*

Seventy-two and forty-eight inch Machines. Parties old and out of health wish to retire. Inspection invited. Address, "W. and E.," care Paper Trade Journal.

**OWEN PAPER MILLS,**

Housatonic, Mass.,

FOR SALE OR RENT. Address
C. L. SIMPSON,
Housatonic, Mass.

## F. H. DAVIS & CO.

*EXCHANGE BLDG., BOSTON.*

DEALERS IN PAPER-MILL MACHINERY, ENGINES, BOILERS, SHAFTING AND PULLEYS.

One 90-inch Fourdrinier Machine, first and second presses gunmetal rolls, sixteen iron dryers, one stack of chilled rolls, cone pulley cutter and Marshall drive complete and in good order to operate.

One 68-inch Fourdrinier Machine, first and second gunmetal and rubber press rolls, fourteen iron dryers, two stacks of chilled rolls, cone pulley cutter and winder, machine all complete with Marshall drive, friction clutches and speed cones.

Two Scott's New England grinders; one Emerson patent beater, 1,000-pound, one 1,200-pound iron tub beater; two 800-pound iron tub beaters; two 14-foot globe rotary boilers; two 7x 6 in. horizontal rotaries; one eSuccess screen; two iron dryers 36x72 in.; one iron dryer 36x81 in.; two dryers 8.x36 in.; two cylinder molds 36x82 in.; three cylinder molds 44x62 in. face; one 62-inch Black & Clawson cone pulley cutter; one 66-inch Black & Clawson cone pulley cutter; one 38-inch Holyoke Machine Co.'s stack nine rolls supercalenders, latest pattern, practically good as new, complete; one 41-inch stack of nine rolls supercalenders, made by Holyoke Mach. Co.; one 50-inch Springfield knife grinder; one 45x36 inch vertical engine with condenser; one 16x48-inch Geo. H. Corliss engine in first-class condition; one 16x42 inch Hamilton Corliss; one 23 x 48 inch Harris Corliss; one 10 x 24 inch Geo. H. Corliss engine; two 12 x 24 inch Buckeyes; one 16x32 in. Corliss and one 9x12 in. Taylor engine.

## FOR SALE.

Four 14x62 inch and four 14x69 inch Cast Iron Knight's Dryers.

All in first-class condition.

BLACK & CLAWSON CO.,
Hamilton, Ohio.

## 200,000 HORSE-POWER TO LET.

The Shawinigan Water and Power Company is prepared to talk with parties desiring to lease large units of power to be used in connection with its development at Shawinigan Falls, Province of Quebec. Address ROOM 308, SEARS BUILDING, Boston.

## FOR SALE.

One each 18", 20", 25", and 30" regular vertical Crocker water wheels, all new; one second hand Rodney Hunt water-wheel governor; one new Snow water-wheel governor of the latest style; three one-gallon Crocker's twin rotary fire pumps, all new. Correspondence solicited. Address

E. D. JONES & SONS CO.,
Pittsfield, Mass.

## FOR RENT.

First-class paper mill located Pennsylvania; cheap stock and fuel; plenty of water; side track at mill for all R. R.; capacity, four (4) tons per day. Apply

J. W. ABBOTT,
Atlantic Paper Mills, Jersey City, N. J.

## CLARK & SPENCER,

Mfrs. of Paper Mill Machinery,

LEE, MASS.

Revolving Paper Cutters,
Rag Cutters,
Cylinder Paper Machines,
Washing and Beating Engines,
Chilled Iron & Paper Calenders,
Fan and Stuff Pumps,
Engine Roll Bars & Bed Plates,
Cylinder Molds,
Marshall Drives,
Slitters and Rewinders,
Reels,
Dryers with Improved Packing Boxes,
Wet Machines,
Gun Metal and Rubber Rolls,
Rolls Reground.

## FOR SALE,

## The Sunny Side Paper Mills

AT UNIONVILLE, CONN.

A three-story brick building, two-story frame building, storehouse, and office building recently occupied by the Ripley Mfg. Co. Splendid and unfailing water power; first wheel on upper level; 18 feet head and fall; 30 inch Hercules Holyoke wheel; 125 H. P. Complete machinery for making all grades of leather and binders' board. Two cylinder wet machines, with power presses; three beating engines; one 1,200-pound and two 400-pound calenders; cutters, dryers, etc., all in good order and ready to start at once. The buildings are in splendid condition and can be easily changed to a fine mill, as was formerly intended. Wood-working shop on premises. The plant can be run economically and at a good profit.

Address HIRAM R. MILLS, 847 Main St., Hartford, Conn.
or SAMUEL Q PORTER, Unionville, Conn.

## TRUSTEE SALE

OF THE PLANT OF

## THE SINGERLY PULP & PAPER COMPANY OF CECIL COUNTY, MARYLAND,

***Including Paper Mill, Pulp Mill and Machinery connected therewith.***

By virtue of a degree of the Circuit Court of Cecil County, the undersigned, as Trustees appointed by said decree, will offer at public sale at the Court House door in Elkton, Cecil County, Maryland, on Wednesday, June 14th, 1899, at 1 o'clock, P. M., the entire plant of the Singerly Pulp & Paper Company of Cecil County, Maryland, as follows:

No. 1.—Consists of a paper mill known as "Providence Paper Mill," located on the Little Elk Creek, in Cecil County aforesaid, on the line of the Lancaster Cecil & Southern Railroad and within three miles of the Philadelphia division of the Baltimore & Ohio Railroad. The land connected with this plant contains an area of 80 acres more or less, and is particularly described in a deed from William M. Singerly to The Singerly Pulp & Paper Company by deed dated on the 10th day of July 1890, and recorded among the land records of Cecil County aforesaid.

The improvements consist of a large paper mill and machinery all in first-class order. Also 20 tenant houses almost new, machine shops, office and stables. The daily capacity of the mill is 114,000 pounds of paper.

The Little Elk Creek from which the water is obtained for washing purposes has been pronounced by experts as the very best for the manufacture of paper and for the use of boilers.

The railroad service at the mills is of the best. The coal and supplies are run into the mill by railway locomotives.

No. 2.—Consists of certain lots or parcels of land located in and adjoining the town of Elkton, Cecil County aforesaid, with wharves on both sides of Elk River, and particularly described in a deed from William M. Singerly to The Singerly Pulp & Paper Company, dated the 10th day of July, 1890, and recorded in Liber J. A. D. No. 21, folio 265, etc., one of the Land Record Books of Cecil County aforesaid.

The improvements consist of a large brick Pulp Mill for the manufacture of chemical pulp from wood. The capacity of the mill is 80,000 lbs. daily. Also machine shops, blacksmith shop, offices and stables. This property is located on tide water on Elk River, easily accessible to poplar and spruce wood growing on Eastern Shore of Maryland and Virginia.

The Railroad facilities at this point are first class over the Pennsylvania System. The freight is conveyed to and from the mill doors by both railway and water communication.

No. 3.—Consists of a lot of land lying between Bridge Street and Singerly Avenue in Elkton along the line of the Philadelphia, Wilmington & Baltimore Railroad, improved by a large warehouse.

Terms of sale as prescribed by the decree are one-third cash on day of sale, one-third in six and the balance in twelve months from the day of sale, the credit payments to be secured by the bond or note of the purchaser with surety or sureties to be approved by the Trustees, and to bear interest from day of sale.

Any person desiring to examine these properties will come to Elkton on the Philadelphia, Wilmington & Baltimore Railroad, and they will be shown over the property.

Send to the undersigned for catalogue giving full description of machinery.

W. T. WARBURTON,
JOHN S. WIRT,
ALBERT CONSTABLE,
Trustees.

ELKTON, CECIL CO., Maryland.

It has the Indorsement of Leading Bankers, Chemists and Experts. **USE** It has never been successfully altered since its introduction in 1875.

# COMMERCIAL SAFETY PAPER,

TO PREVENT THE "RAISING" OF CHECKS, DRAFTS, ETC.

It is the ONLY PAPER, when once written upon, from which the INK cannot be removed, thereby preventing the "raising" of Checks, Drafts, &c.

—MANUFACTURED BY—

**MOUNT HOLLY PAPER COMPANY,** MOUNT HOLLY SPRINGS, PA., U. S. A.

Also manufacture a Tub Sized and Loft Dried Map Paper that will not shrink or distort, especially adapted for Printing in Colors, as well as Flat and Folded Ruled Papers of every description.

## PAPER MACHINE PRACTICE.

### Hints as to the Manner of Washing Felts—Control of the Flow of Stuff to the Machine—Management of Dandy Rolls.

A correspondent of Paper and Pulp writes to that journal regarding a problem which is becoming more acute every day—the time lost in washing and changing wet felts. None of the so-called patent devices for continuous washing have, so far, been signally successful, the general verdict being that they take the life out of the felt, and in doing so cause the felt mark to be much more pronounced, which is in itself a great drawback, especially in the making of the better grades of paper. Whether the wet felt be washed continuously or periodically, it will be found to run much longer if attention is paid to having it well stretched up, and the seam square. When run under those conditions it will be found that the water passes through much more easily, and accordingly the resinous matters are less apt to remain in the felt, while having it well drawn out will do much to prevent "blowing."

Every machine-man knows that when the edges of the web are clean cut, and free from feathery places, there is much more chance that the paper will not break either at the press-roll or in going through the calender rolls. In order to ensure clean edges there are several points which require attending to, the foremost being the deckle-strap itself, as sometimes, when it gets to be old, the small cracks which then appear will cause thin spots in the edge of the web, and should the paper be thin the chances are that the weak place will give way when drawn out at the calenders. It is also of importance that the connections between the slices, apron and deckle be as simple as possible, and that every part should be well oiled, so as to work easily when changing deckles, and ensure that the straps are free to travel with the wire. This last is a most important point, especially when the straps are driven, as any variation in the speed as between the wire and the deckle-strap will invariably cause the knots which are so liable to give rise to breaking both at draws between the drying-cylinders and at the calender rolls.

The manner in which the stuff flows on to the breast of the machine has much to do with whether the machine turns out satisfactory work or otherwise. It is not always possible to arrange that the stuff will flow straight forward to the breast of the machine, and, indeed, many machines are so fitted up, owing, it may be, to the small space available, that the flow of the stuff, when entering the breast-box, is at a right angle to the direction in which the wire runs. Under such conditions, it requires no small degree of skill on the part of the machine-man to ensure an equal spread when working greasy stuff. With free stuff, as is obvious, a much better result may be obtained, as it will spread out uniformly and has altogether more activity when under the influence of the shake. Having regard to the difficulty above mentioned, it is well, whenever possible, to arrange that the flow may be a direct one, and so make sure that the machine is fitted to give a satisfactory result with any kind of stuff.

To allow for the expansion, which the force exerted by the draws between the various parts of the machine renders inevitable, the circumference of the dandy-roll is usually half an inch less than the size of the space in the finished sheet. Notwithstanding this, however, it is frequently necessary to change the tension of the draws in order to bring the names to their proper place in the sheet. In order to effect this the dandy should be hung in the brackets, taking care that it is not raised so high as to cause it to revolve erratically, or the effect on the sheet will be very disastrous. The draws will also require to be tightened up, more especially the draw between the wire and the press-roll.

Laid dandies will be found to require much more water in the pulp than wove dandies, and though this change may be effected by shutting the first pump-box, the better plan is to put on more water and put up the shake. This has the effect of making the impression much more clear, and is especially noticeable when making the best qualities of tinted papers, such as azures and blues.

When making fine wove papers the shake should not be put up too much and the pump-box should be well shut, though, of course, there is no hard and fast rule, and the nature of the pulp and the manner of preparation must always remain a determining factor of the first importance.

### Resinous Soap.

A method of producing a resinous soap, containing quantities of free resin, for the sizing of paper has recently been made public on the Continent. It is characterized by the dissolution of resin, with the addition of 3 per cent. of carbonate of soda and very little water, by steam direct, at a temperature of from 80° to 100° C., or more, agitating continually and adding afterward, mechanically and without using steam, by simple introduction and agitation, the amount of carbonate of soda (6 to 7 per cent.) necessary in order to make the soda soluble in the water. This will produce sure and irreproachable sizing—Revue de la Papeterie.

### Pneumatic Hoists for Mill Use.

Pneumatic hoists of different styles are extensively used in every branch of trade, in all places, in fact, where it is necessary to raise heavy loads frequently and expeditiousiy. The type of hoist in most general use, and the one possessing the widest range of adaptability, is the ordinary direct acting, straight-lift hoist. This is simply a cylinder suspended from the top end, and fitted with a piston and piston rod, the latter having a hook at its lower end for receiving the weight. In the smaller sizes of these hoists the cylinder usually consists of ordinary brass tubing with cast heads held in place by tie rods passing through the heads and secured by nuts. In the larger hoists, the cylinder is a casting, bored out to the proper diameter.

When the nature of the surface permits, the hoists are suspended in a fixed and permanent location, but their greatest field of usefulness is realized by suspending them from a trolley running on an overhead rail. When so arranged, the air-supply hose is sufficiently long to permit the hoist to be moved the entire length of the overhead rail. The hose is wound upon a drum, and passes over idlers arranged alongside of the rail, a spring being utilized for rewinding the hose upon the drum as the hoist returns.

Another method is to disconnect the hose from the hoist when necessary, by means of a convenient coupling, the escape of air being prevented through the automatic closing of the valve by the air pressure. With this arrangement, the range of travel of the hoist with its load is unrestricted. The hoist requires no labor other than the manipulation of a three-way valve, and the load may be held at any point at will. The speed of lifting is variable, being entirely under the control of the operator, and the workman does not have to wait for slowly moving mechanism, as in chain hoists.

Horizontal cylinder hoists may be used in cases where head room is lacking, and these are constructed in a variety of forms; but whenever the conditions will permit, whether upon cranes or otherwise, the vertical, direct-acting type is preferable, as it is more easily operated, is higher in efficiency, and lifts more evenly and smoothly than the other type.

When it is impossible to utilize either the vertical or horizontal hoists, the air motor hoist may be used to advantage. In this device the common differential chain hoist is provided with an air motor, fitted between the side plates which form the frame of the hoist.—Cassier's Magazine.


THE AMERICAN MANUFACTURING COMPANY

MAKERS OF CORDAGE

PUBLISHERS OF "A Little Blue Book on Rope Transmission."

67 WALL STREET
NEW YORK

Buchanan & Bolt Wire Co., ...ESTABLISHED 1878.

HOLYOKE, MASS.,

Manufacturers of DIAMOND DRAWN FOURDRINIER WIRES with Improved Seam for News Paper, also DANDY ROLLS and CYLINDER MOULDS.

Our patent dovetailed dandy is the strongest and lightest roll on the market.

Brass, Copper, Bronze and Iron Wire Cloth for Pulp and Paper Mills.

We make a specialty of watermarking, designing, monograms and lettering of every description.

CYLINDERS COVERED AT THE MILL OR AT OUR FACTORY.

PIQUA WOOLEN MILLS.

The F. GRAY CO., Piqua, Ohio,

MANUFACTURERS OF

FOURDRINIER, HARPER and CYLINDER

FELTS.

PRESS FELTS AND JACKETS FOR ALL KINDS OF PAPER.

Try our Special Five X Jackets; they have no equal.

APPLETON WIRES are the Wires.

Cylinder Covers and Washer Wires too.

Do you run them?
Only one grade—the best.
We solicit a trial order.

APPLETON WIRE WORKS,

APPLETON, WIS.

STOP TELLING ....WHAT YOU CAN DO AND TELL US WHAT YOU'VE DONE!

ALL RIGHT, LISTEN! We have made and sold a million or more Graphite and Bronze Bushings and Bearings for machinery that run without oil or grease. Send for circulars.

THE GRAPHITE LUBRICATING CO.,

BOUND BROOK, N. J., U. S. A.

CAMERON STEAM PUMP
SIMPLE, RELIABLE, COMPACT, DURABLE.
NO OUTSIDE VALVE GEAR.
ADAPTED FOR ALL PURPOSES.
THE A.S.CAMERON STEAM PUMP WORKS
FOOT OF EAST 23d STREET, NEW YORK.

# DIRECTORY.

**Cards under this heading will be charged for at the rate of $15 per annum for each card of three lines or less. Each additional line $5.**

### Architects.

EDWARD A. BUSS, Mill Architect and Engineer, 85 Water St., Boston.

O'KEEFE & ORBISON, Paper Mill Architects, Hydraulic and Consulting Engineers, Appleton, Wis.

PRIDE, CHAS. B., Mill Architect and Hydraulic Engineer. Specialties: Paper and Pulp Mills. Appleton, Wis.

TOWER & WALLACE, Architects and Engineers. Ashley B. Tower, Consulting Engineer. Paper and Pulp Mills. Power Development. Broadway and Twenty-fifth St., New York, N. Y.

### Bale Ties.

WILSON, H. P. & H. F., Manufacturers of Steel Wire, Bale Ties, for baling all compressible material. 577 and 579 Tenth ave., New York City.

### Fourdrinier Wire Manufacturers.

BROWN & SELLERS, manufacturers of Fourdrinier Wires, Wire Cloth, Dandy Rolls, etc. Holyoke, Mass.

BUCHANAN & BOLT WIRE CO., Patent Seamless Wove and Laid Dandy Rolls, Fourdrinier Wires. Holyoke, Mass.

### Cotton Fibre.

TENNESSEE FIBRE CO., Memphis, Tenn., manufacturers for the past five years for makers writing, book, blotting and news. Stronger than soda, better than sulphite—takes place of rags.

### Ground Wood Pulp.

NEWFOUNDLAND GROUNDWOOD PULP and pulp wood in the log for grinding, for sale by HARVEY & OUTERBRIDGE, 29 Broadway, New York.

### Jute Butt Brokers.

CABOT, RAY & CO., 81 Water St., New York.

### Metal Skylights and Ventilators.

WE manufacture metal skylights and ventilators for Paper and Pulp Mills. E. VAN NOORDEN CO., 343 Harrison Ave., Boston, Mass.

### Paper Clays.

LIZZIE CLAY AND PULP CO., Manufacturers White New Process Clay for Paper Trade. Established 1870, M. T. Warne, Proprietor. Phillipsburg, N. J.

### Paper Makers' Supplies.

ROTATORY engines and engraved rollers and plates for the manufacture of lace and shelf paper, cake, fruit and bouquet papers, made as principal specialty by OSCAR BRAUSE, Berlin, Gitschiner str. 6a.

HEWITT, C. B., & BROTHERS, Paper, Boards, Glue, 48 Beekman St., New York.

HULBERT, H. C., & CO., 53 Beekman St., N. Y.

MURPHY, JOHN J., 47 John and 5 Dutch Sts., N. Y.

### Paper Makers' and Stainers' Colors.

HUBER, J. M., manufacturer and Importer of Carmine, Pulp Colors, Orange Mineral, Ultramarine, Paper Blue. 275 Water St., New York.

### Paper Makers' Knives.

DOWD, R. J., Manufacturer of Paper Engine Bars and Plates, Stop Cutters, Rag Knives, Barker Knives, Chopper Knives and Machine Knives of all kinds. Beloit, Wis.

### Paper Manufacturers.

DIAMOND MILLS PAPER COMPANY, White and Colored Tissues, Copying Paper, 44 Murray St., N. Y. Send for samples of the new "Mikado" Tissue Paper.

JERSEY CITY PAPER COMPANY, Fourdrinier Tissues, White, Colored and Copying; Roll Tissues, all widths, to order. Cornelison Ave. and Montgomery St., Jersey City, N. J.

STOEVER, CHAS. M., & CO., Manufacturers of and Dealers in Book, News, Writing and Manilla Writing and Wrapping Papers. 320 Minor St., Philadelphia.

### Rags, Paper and Paper Stock.

BRUNELAT & L'HERMITTE & BREST (France). Paper stock, all grades, new and old. Mungo and soft rags. Write for the prices.

BOYLE, LUKE, 390 West Broadway, New York.

CHASE & NORTON, High-grade Shavings and Book Stock a Specialty, 277 Water St., New York.

FITZGERALD, J. M., 413 West Broadway, N. Y.

FLYNN, MICHAEL, 61 Congress St., Brooklyn, N. Y.

HILLS, GEO. F., 22, 24 and 26 Roosevelt St., N. Y.

LIBMANN, JOSEPH, & CO., New Rags a Specialty. 351 and 353 West Broadway, New York.

LIVERPOOL MARINE STORE CO., Liverpool, England. L. M. S. Brand, Manilla, Rope and Star Brand.

HIGH WAY BRIDGE AT THOMPSONVILLE, CONN.
BOILER SHOP FOR DICKSON MFG. CO. SCRANTON, PA.
THE Berlin IRON BRIDGE COMPANY
East Berlin Conn.
CHAS. M. JARVIS PRESIDENT
GEO. H. SAGE, Secy. & Sup't
F. L. WILCOX, Treasurer
D. E. BRADLEY, Mang. Contracting Dept.
JAS. H. EDWARDS, Chief Engineer
NEW YORK OFFICE 718 BENNETT BLDG COR. FULTON & NASSAU STS.
BOSTON OFFICE 200 EQUITABLE BLDG
PHILADELPHIA OFFICE 1215 STEPHEN GIRARD BUILDING
MACHINE SHOP, FULLER IRON WORKS PROVIDENCE, R.I.

# DILLON MACHINE COMPANY,

MANUFACTURERS OF

## DILLON'S IMPROVED PAPER MILL MACHINERY,

**Calender Feeds, Regulators, Paper Cutters, Jordan Engines, Beating Engines, Stuff Chests, Single, Double and Triple Power Pumps,**

## LAWRENCE, MASS.

# ALUM!

THE MERRIMAC POROUS ALUM is unsurpassed for purity and good results.

All other grades of Alum for paper makers' use and for filtering purposes.

Address **MERRIMAC CHEMICAL CO.,**
**13 Pearl Street, BOSTON**

---

# YOU CAN USE THE AEROPHOR PAPER DAMPENER
ON ALL YOUR MACHINES.

***It will Improve the Finish and Quality of News, Book and Manilla.***

Write for particularr

**THE AEROPHOR COMPANY, No. 45 Milk Street, Boston, Mass.**

---

1850 **THE BEST IS THE CHEAPEST.** 1899

USE

# BROWN'S

"LINEN LEDGER AND RECORD" papers for Blank Books.
"ALL LINEN" papers for Typewriting, Correspondence, Etc.
"BOND AND PARCHMENT" papers for Policies, Deeds, Etc.
"GENUINE HAND-MADE" papers for Drawing, Water Color Painting, Editions de Luxe, Etc., Etc.

**Send for Samples.**

**L. L. BROWN PAPER CO.,**
**ADAMS, MASS., U. S. A.**

---

# THE T. G. LAMAR KAOLIN CO.,

MINERS AND SHIPPERS OF

## High-Grade South Carolina Clays,

**Especially Adapted for the Paper and Wall-Paper Trade.**

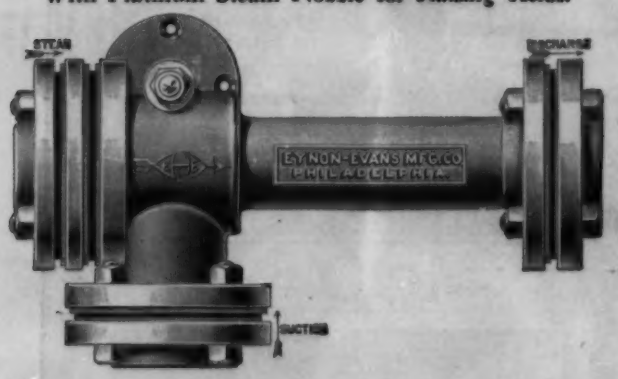
LARGEST SHIPPING CAPACITY AND MOST COMPLETE CLAY WORKS IN THE UNITED STATES.

WM. M. WILSON'S SONS, 225 Dock St., Phila.

W. J. OLIVER, Mang'r and Sec'y, Langley, S. C.

---

## Lead Syphons in Iron Shell.
With Platinum Steam Nozzle for Raising Acids.




# Acid Syphons—for Paper and Sulphite Mills.

**Transfers the acid from original receptacle or tank direct to digester without the use of a pump.**

Is lead lined in iron shell and platinum nozzle. Handles safely and economically all acids destructive to iron and brass.

***OUR GUARANTEE—Thorough satisfaction or money refunded.***

**The Eynon-Evans Mfg Co., 1519 Clearfield St., Phila.**

**Manufacturers of Economical equipment for Paper and Sulphite Mills including**

**107 Liberty St., New York.**
**42 Oliver St., Boston, Mass.**

Y digester blow-off valves, exhausters and compressors, blowers and ventilators—made of lead with platinum steam nozzles, for handling sulphuric and other acid gases which attack brass and iron. Devices used for creating draft in flues or condensing towers of acid chambers.

Also Agitators for liquid when mixing and treating liquids chemically.

*Write for information.*

---

# Lockwood's ....Directory

**FOR 1899-1900**

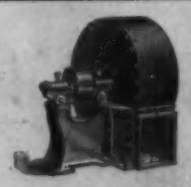
Will be ready July 1st, 1899.

Order should be sent in now.

---

**THE JEFFREY MFG. CO., Columbus, Ohio.**
Send for Catalogue. 41 Dey Street, New York.

---



# FANS and.... DUST COLLECTORS

HANDLING ALL KINDS OF DUST A SPECIALTY.

## THE ALLINGTON & CURTIS MFG. CO.,

**East Cambridge, Mass.** Telephone, No. 310 Charlestown.

**SAGINAW, MICHIGAN.**

---

# "GLUGLOSS"

**COATING** —TRADE MARK— **SIZING**

Makes Velvety, Pliable surface.
With superior transparent high glaze.
Gives Coated "Whites" a livelier, brighter shade.
Has best affinity for ink.
Mixes well with colors.
Toughens the sheet
Gives good rattle without brittleness.
Makes waterproof surface.
Is of exceptional value to boards.

**WHAT GLUGLOSS IS DOING** in many leading mills where it has been permanently adopted *it will do for you.* A free sample can be had for the asking, and a trial will convince you as to its economy and efficiency. Requests for information solicited.

**QUAKER CITY CHEMICAL CO.,** Sole Manufacturers and Proprietors,
1834 to 1846 Bristol Street, Wayne Junction, PHILADELPHIA, PA.
PERKINS, GOODWIN & CO., 66 and 68 Duane Street, New York, Selling Agents.


# DIRECTORY.

LYON, JOHN H., & CO., 174 Duane St., New York.

McGUIRE, MICHAEL, 100 and 102 Tenth Ave., N. Y.

DANIEL I. MURPHY, Philadelphia, 114 So. Delaware Ave.

OVERTON, R. H., & SON, 104 Times Building, New York.

PIONEER PAPER STOCK CO., Packers and Graders of Paper Stock, 322 and 324 S. Desplaines St., and 105 and 107 Law Ave., Chicago. PERRY KRUS, Pres't.

SIMMONS, JOHN, & SONS, Wholesale Dealers in Paper and Rags, 26 and 30 Decatur St., Philadelphia, Pa.

WARD'S SONS, OWEN, 448 and 450 W. Thirty-ninth St., N. Y.

**Screen Plate Manufacturers.**

APPLETON SCREEN PLATE CO., Manufacturers and Repairers of Rolled Brass and Cast Metal Screen Plate. For accuracy of work, durability of metal and price, our Plates cannot be surpassed. Write for prices. Appleton, Wis.

FOX RIVER SCREEN PLATE CO. Reclosing and recutting of worn screen plates a specialty. W. M. Babb, Proprietor, 739 Water St., Appleton, Wis.

**Sealing Wax.**

BROWNE, M. C.—Especially for Paper Mills and Wholesale Paper Dealers. Holyoke, Mass.

**Straw Board.**

MANHATTAN STRAW BOARD CO., 141-145 Wooster St., New York. D. J. O'CONNELL, Sec'y and Treas.

**Toilet Paper Manufacturers.**

M. A. SWIFT'S SONS (Incorporated), Sheet and Roll Toilet. Write for Samples and Prices; Correspondence solicited. 15 Exchange St., Boston, Mass.

**Waxed Papers.**

THE HAMMERSCHLAG MFG. CO., Manufacturers of all kinds of Waxed Papers, plain and printed. 232 and 234 Greenwich St., New York.

THE SPARKS MFG. CO., White and Manilla Tissue and Waxed Paper. Hamburg, Sussex Co., N. J. New York office, 105 Hudson St.


# JUTE AND LINEN Paper Stock.

## J. & W. SMITH,

**DUNDEE, Scotland,**

Packers and Shippers of

**Clean Jute Threads, Clean Jute Ropes, Gunny Bagging, Manilla Ropes, Bleached Linen Cuttings and Bleached Linen Threads.**

ENGINE CLEANING WASTES, Wadding Wastes, Colored Jute Wastes, Bleached Jute Wastes, Felting Wastes and Carded Jute Tows.

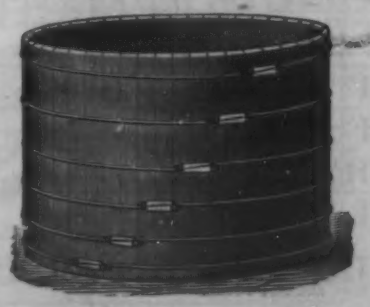
OFFICES:
CALCUTTA BUILDINGS.
WORKS:
COMMERCIAL COURT.
WAREHOUSES:
EXCHANGE STREET.
**DUNDEE, Scotland.**

---

**ESTABLISHED 1845.**

## GEO. J. BURKHARDT'S SONS' Cedar Tank Factory

**2831 TO 2839 NORTH BROAD ST., Philadelphia.**



# LOBDELL CAR WHEEL CO.,

Wilmington, Del., U. S. A.,

MANUFACTURERS OF

## CHILLED ROLLS

FOR PAPER MACHINES,

Rubber, Brass, Copper, Flour, Oil and Ink Mills, &c.

OPEN END BOX HOUSINGS.

CALENDERS FURNISHED COMPLETE with PATENT OPEN FACE HOUSINGS, OPEN END HOUSINGS, or ORDINARY STYLE HOUSINGS.

THE HARRINGTON & KING PERFORATING CO. CHICAGO.

Brass, Bronze, Copper, Galvanized Iron, Steel, &c.,

PERFORATED AS REQUIRED FOR

## PAPER AND PULP MILL SCREENS

AND FOR USE IN—

Vats and Tanks,
Pulp Screens, Washers,
Suction Box Covers,
Shower Pipes, Rolls,
False Bottoms, Filter Plates,
Drainer Bottoms,
Sand Traps, Strainers,
Stock Boilers, Digesters,
Button Catchers,
Screens of all kinds.

BLUE PRINTS OR SAMPLES FURNISHED.

Standard Sizes Perforated Tin and Brass Always in Stock.

Main Office and Works: No. 219 North Union Street, Chicago, Ill., U. S. A.

Eastern Office: No. 284 Pearl Street, New York.

## Appleton Woolen Mills,

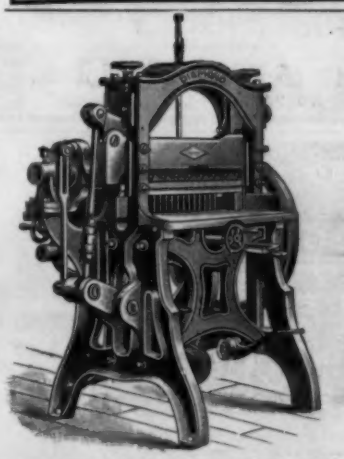
APPLETON, WIS.

MANUFACTURERS OF

PAPER MAKERS' FELTS and JACKETS.

We have not only demonstrated our ability to compete in all PAPER MAKERS' FELTS AND JACKETS, but in most lines claim to lead our competitors.

*CORRESPONDENCE SOLICITED.*



## Paper Cutters

... Either ...

*HAND OR POWER.*

Gem, Victor and Diamond Cutters

Excellent Proportions, Simplicity of Construction. Shear Cut Motion of Knife, Adjustable Gauges, Convenient and Noiseless.

*SEND FOR 1899 CATALOGUE.*

HOWARD IRON WORKS, BUFFALO, N. Y.

| Calumet.... ..... Sizing | PURE, ODORLESS, COLORLESS, FLOWS REGULARLY. | Calumet.... ....Coating |
|---|---|---|

COSTS LESS, GOES FARTHER AND WORKS BETTER THAN ANY OTHER.

Calumet sizing improves finish and feel of sheet, making it firmer and stronger. Requires no alum in the tub and about half the amount of alum and rosin in the engine, frequently giving in the latter cases a result identical to tub sizing. Gives increased retention to loaded papers.

Calumet coating mixes well with colors, making permanent tints, with increased lustre. Makes soft, pliable, non-stretching, water and grease proof surface, especially adapted to fine half-tone printing and lithography. Does not harden on brushes.

Calumet coating and sizing is more economical than any other, and is being used in many leading mills in the United States.

FREE SAMPLE AND INSTRUCTIONS FOR USING SENT ON APPLICATION

Calumet Manufacturing Co., ADAMS, JEFFERSON CO., NEW YORK.

## American Straw Board Company,

Manufacturers and Dealers in

## STRAW BOARD.

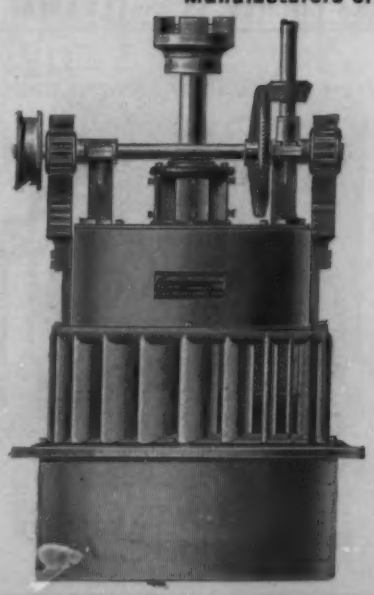
All Kinds of Paper Box Boards.

GENERAL OFFICE,

1325 Old Colony Building, Chicago.

## J. & W. JOLLY, HOLYOKE, MASS.

Manufacturers of



McCormick's Holyoke Turbines,
Both Horizontal and Vertical,
"White's" Patent Oscillating Screens,
"Doane's" Patent Wood Pulp Grinder,
Beating and Washing Engines,
Rag Engines and Jordan Engines
Made and Refilled,
Bleach Boilers, Fan Dusters,
Ferry's Patent Star Duster,
Paper Calender Rolls made and repaired,
Chilled Rolls, Sheet, Super and Web Calenders,
Power Suction Pumps, Stuff Pumps, Power Boiler Pumps,
Suction Boxes and Plates,
Pulleys, Shafting, Gearing, etc.

## THE BLEICHERT WIRE ROPE TRAMWAY,

AND OTHER SYSTEMS OF AERIAL TRANSPORTATION.

Bleichert Tramway at the Chilkoot Pass.

Manufactured by The Trenton Iron Co., Trenton, N. J.

Engineers and Contractors and sole licensees in North America for the Bleichert System. Also Wire Rope Equipments for Surface and Underground Haulage, Etc.

NEW YORK OFFICE—Cooper, Hewitt & Co., 17 Burling Slip. CHICAGO OFFICE—1114 Monadnock Building.

ASBESTOS FIRE-FELT COVERINGS

PURE ASBESTOS — ABSOLUTELY FIRE PROOF.
REPLETE WITH AIR CELLS — PERFECT NON-CONDUCTORS.
STRONG LIGHT FLEXIBLE, EASILY APPLIED.
MADE IN SECTIONS — THREE FEET LONG
FIT STANDARD PIPE — INCH TO 16 INCHES

H. W. JOHNS MFG. CO.
NEW YORK-CHICAGO-PHILADELPHIA-BOSTON
MAKERS OF
ASBESTOS MATERIALS. — LIQUID PAINTS & STAINS
ROOFING MATERIALS. — ELECTRICAL MATERIALS

# DE WITT WIRE CLOTH CO.

Manufacturers of.....

BRASS, COPPER AND IRON WIRE CLOTH OF EVERY DESCRIPTION

**Paper Makers' Supplies**
Fourdrinier Wires, Dandy Rolls, Cylinder Moulds, Etc.

WIRE ROPE, WIRE SASH CORDS, WIRE PICTURE CORD, BRASS AND COPPER WIRE, WIRE WINDOW SCREENS AND GUARDS, WIRE FENCING.

NEW YORK OFFICE, 17 Warren St. PHILADELPHIA OFFICE, 703 Market St.

READY TO APPLY FINISHED JOINT

BRISTOL'S PATENT STEEL BELT LACING

The most perfect fastening for all kinds of belting.
Large sizes adapted to Rubber Belts for Paper and Pulp Mills.
*Samples sent free.*

*THE BRISTOL COMPANY*
*Waterbury, Conn.*

EASTWOOD WIRE MFG. CO., Belleville, N. J.

Manufacturers of **Fourdrinier Wires** WITH PATENT SAFETY EDGE.

IMPROVED PATENT DANDY.

PATENTED AUGUST 19, 1884.

Brass, Copper and Iron Wire Cloth of Every Description.
SEND FOR SAMPLES AND PRICES.

# Wm. Cabble Excelsior Wire Mfg. Co.

...Manufacturers of...

Superior Fourdrinier Wires,
Cylinder Wires,
Brass, Copper and Iron Wire Cloth of every description,

Brass, Copper and Iron Wire,
Dandy Rolls,
Cylinder Moulds,
Best Quality of Wire Rope,

WRITE FOR PRICE LIST.

43 FULTON STREET, . . . NEW YORK.

# G. H. SMITH & CO.

PATENTEES & SOLE MANUF'RS. OF
The Original Hollow Truss DANDY ROLLS.
ARTISTIC WATER MARK WORK A SPECIALTY
Holyoke, Mass.

3,000 IN USE, UP TO 162 INCHES WIDE

"DOUBLE THE STRENGTH OF ANY OTHER ROLL."

# HUNT-McCORMICK TURBINES.

This cut shows a plant for eleven thousand horse power we have recently installed at Columbia, S. C., for electric power for Mills, Street Cars and Lighting.

Also recently installed a pair of turbines for Merrimack Mfg. Co., Lowell Mass., 1350 H. P. Efficiency 86.47 per cent., proportionally at all stages of gate.

Write for New Catalogue and state requirements. Plans and Estimates furnished.

RODNEY HUNT MACHINE CO., ORANGE, MASS. BOSTON OFFICE, 70 KILBY STREET.

# C. K. WILLIAMS & CO., EASTON, PA.,

Proprietors of the Fenna-Dry Paint & Color Works, of Easton, and the Helios Dry Color and Chemical Works and the Allentown Copperas Works, of Allentown, Pa.

Miners and Manufacturers of Mineral Pulp, American Talc, Agalite Royal Hardening, Keystone, Imported and American Clays, Yellow and Chromo Ochres, Venetian Reds, Red Oxides, &c.

PUT UP IN PACKAGES TO SUIT THE CONVENIENCE OF PAPER MAKERS.

TRADE MARK.

ESPECIALLY ADAPTED FOR *PAPER MAKERS' USE.*

# ROLLS OF ALL KINDS GROUND BY "POOLE" PROCESS.

Machinery and Machinery CASTINGS OF ALL KINDS.
Pattern Making and Job Work Desired.

PAPER DRYERS.
PAPER AND PULP MACHINERY.
SEND FOR GEAR CATALOGUE

We are fully equipped to build light and heavy SPECIAL MACHINERY and would be pleased to furnish estimates.

THE TOWNSEND FURNACE AND MACHINE SHOP CO., ALBANY, N. Y.

# NATRONA POROUS ALUM,

FOR PAPER MAKERS' USE.

*The Strongest and Purest Alum made and the only Alum made from Kryolith Alumina.*

PENNSYLVANIA SALT MFG. CO.,

W. M. ELLICOTT & SONS, Baltimore, Md.,
MOREY & CO., Boston, Mass.,
GEO. H. EMBREE, New York,
} Agents.

115 CHESTNUT STREET, PHILADELPHIA, PA.

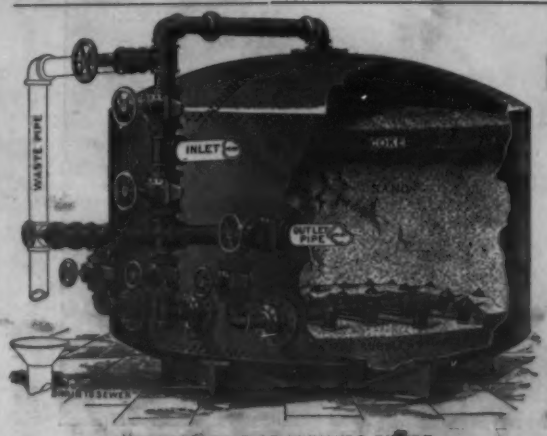
# Star Clay Company, Limited

Miners and Manufacturers of ...
White ... China Clay
Especially adapted to Paper Makers' use.

TRADE MARK.

Miners and Manufacturer of ...
White ... China Clay
Especially adapted to Paper Makers' use.

Office and Works: MERTZTOWN, BERKS COUNTY, PENNSYLVANIA.




NEW YORK TYPE OF PRESSURE FILTER.

HIGHEST EFFICIENCY.

# Gravity and Pressure FILTERS

Constructed under the JEWELL, WARREN and HYATT PATENTS.

"The Acknowledged Standard of Mechanical Filtration."

Endorsed by the Leading Paper Manufacturers throughout the United States.

Patents Sustained by the Highest Courts.

NEW YORK FILTER MANUFACTURING COMPANY,
26 Cortlandt St., New York, N. Y.

O. H. JEWELL FILTER COMPANY, 40-42 West Quincy St., Chicago.

NEW YORK TYPE GRAVITY FILTER.

LOWEST PRICES.


LOCKWOOD PRESS, NORTHWEST CORNER OF BLEECKER STREET AND WEST BROADWAY, NEW YORK.